

SAUSAGE

AND

PROCESSED
MEAT
FORMULATIONS

Herbert W. Ockerman



Sausage and Processed Meat Formulations

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PREFACE

This formulary was assembled to meet the needs of the food industry, researchers, and students for information on comminuted meat processing formulations and procedures. It provides answers to questions such as: “How can I change the formula?” “What new materials can I use?” “What would happen if. . .?”

Until now, information on formulations and procedures has been difficult to locate or confidential, and has varied considerably from producer to producer. This formulary draws together a large body of information on basic formulas and variations — a good deal of it generously shared by “Sausage Masters” about to retire. Included is an international array of sausages, salamis, loaves, patties, and other processed meat products. Also included are formulas for non-meat ingredients used in the formulations, such as sauces and curing brines. Thus, in the following pages over one million possible combinations of ingredients and procedures are presented in an easy-to-use format.

The author welcomes readers’ comments on specific combinations, as well as additional recipes and processing procedures.

HOW TO USE THE INFORMATION IN THIS BOOK

For each item, the information (where available) is listed in four categories. They are:

Major ingredients. Listed vertically on the page under a letter designation.

Curing and spice ingredients. Listed vertically on the page and designated by numbers.

Processing procedures. Listed consecutively and designated by letters.

Cooking forms. Listed consecutively and designated by numbers.

In most cases the *major ingredients* can be combined with any *curing and spice ingredient* and then combined with any *processing procedure* and any *cooking form*. Each product type could be identified by listing letter, number, letter, number. It should be noted that not all combinations have been produced and evaluated and not all combinations will prove equally acceptable. An asterisk suggests that this variation does not meet federal regulations or commonly accepted guidelines for this specific value.

Sausage and Processed Meat Formulations

BACON, BEEF, BRINE CURE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Beef													
Plate	41	40	18	42	16	25	100	100					
Dry Ingredients													
Salt	.01	0	0	0	40	0	8.5	8.5					
Sugar (sucrose)	.06	0	0	0	10	0	2.0	1.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	42.5	42.5					
Calculated composition 10% shrink													
% Pump							10	10					
Moisture							38.4	38.5					
Fat							40.0	40.4					
Protein							18.2	18.2					

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat									
				1	2								
Curing Ingredients													
Na or K Nitrite	0.1	0	0	1	1								
Na or K Nitrate	0.1	0	0	1									

BACON, BEEF, BRINE CURE

Section 3 of 4

Processing Procedures

A.

1. Mix brine
2. Place plates in brine, 4 days
3. Rotate meat, return to same brine, 4 days
4. Shower
5. 135°F smokehouse, dampers open until dry
6. 135°F, dampers 1/4 open, smoke
7. 150°F, dampers closed, no smoke, to internal temperature of 135°F
8. Leave in smokehouse 1 hour, no heat
9. Chill, 18 hr., 38°F
10. Slice

B.

1. Pump, 10%
2. Dry, 135°F
3. Smoke
4. Cook to internal temperature of 135°F
5. Cool, in room temperature to internal temperature 100°F
6. Chill, 36°F

Cooking Form

Section 4 of 4

1. Bacon comb

BACON, BEEF, DRY CURE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Beef													
Plate	41	40	18	42	16	25	100	100					
Dry Ingredients													
Salt	.01	0	0	0	40	0	3.5	3.25					
Sugar (sucrose)	.06	0	0	0	10	0	1.1	1.25					
Calculated composition 15% shrink													
Moisture							28.5	28.5					
Fat							45.0	45.0					
Protein							20.2	20.3					

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat									
				1	2								
Curing Ingredients													
Na or K Nitrite	0.1	0	0	0.8	0.68								
Na or K Nitrate	0.1	0	0	0.8									

BACON, BEEF, DRY CURE

Section 3 of 4

Processing Procedures

A.

1. Mix dry ingredients
2. Chill meat, 38°F
3. Rub plates, meat side up, place in box
4. Stack tightly
5. In 2 days meat is covered with a natural brine
If this is not the case use brine to cover

 brine
 0.90 lbs. salt
 0.19 oz. nitrite
 0.35 lbs. sugar
 1 gal. water
6. Cure, 7 days
7. Shower
8. Smokehouse, 135°F, damper open, until dry
9. Smokehouse, 135°F, smoke, damper 1/4 open, heat to an internal temperature of 128°F
10. Smokehouse, 120°F, smoke to desired color
11. Chill 36°F for 18 hrs.
12. Slice

B.

1. Mix dry ingredients
2. Chill meat to 27°F
3. Rub with curing mix
4. Cure 4-5 days, 38°F
5. Shower
6. Dry
7. Smoke
8. Cook to internal temperature of 135°F
9. Room temperature, to internal temperature of 100°F
10. Chill, 34°F

Cooking Form

Section 4 of 4

1. Bacon comb

BACON, BRINE CURE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Pork													
Belly	29	61	9	86	0	3	100	100					
Dry Ingredients													
Phosphate	1	0	0	0	40	0	1.0						
Salt	.01	0	0	0	40	0	9.0	8.5					
Sugar (sucrose)	.06	0	0	0	10	0	1	2					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	42.5	42.5					
Calculated composition 10% shrink													
% Pump							10	10					
Moisture							26.2	26.3					
Fat							61.6	61.6					
Protein							9.1	9.1					

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat									
				1	2								
Curing Ingredients													
Na or K Nitrite	0.1	0	0	1	1								
Na or K Nitrate	0.1	0	0	1									

BACON, BRINE CURE

Section 3 of 4

Processing Procedures

A.

1. 38°F pork
2. Dissolve ingredients in water and pump meat with 8% brine, 75° salinometer
3. Place in container, meat side up, open container drain
4. Cover with paper, cure 5 days, 38°F
5. Hot water shower
6. Smokehouse 135°F, damper open until meat is dry
7. Dampers 1/4 open, smoke, 135°F to internal temperature of 128°F
8. Reduce temperature to 120°F, hold in smoke for desired color
9. Chill 38°F, 18 hrs
10. Slice

B.

1. 27°F pork
2. Pump meat, 10% with brine
3. Cure, 4 days, 40°F
4. Shower
5. Dry
6. Cook and smoke to internal temperature of 120°F
7. Chill to 27°F
8. Form
9. Slice, spray with 5% ascorbic acid
10. Package

Cooking Form

Section 4 of 4

1. Bacon comb

BACON, DRY CURE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Pork													
Belly	29	61	9	86	0	3	100	100					
Dry Ingredients													
Phosphate	1	0	0	0	40	0	0.3						
Salt	.01	0	0	0	40	0	3.25	3.5					
Sugar (sucrose)	.06	0	0	0	10	0	1.25	1.1					
Calculated composition 15% shrink													
Moisture							15.0	15.0					
Fat							68.5	68.6					
Protein							10.1	10.1					

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat									
				1	2								
Curing Ingredients													
Na or K Nitrite	0.1	0	0	0.8	0.68								
Na or K Nitrate	0.1	0	0	0.8									

BACON, DRY CURE

Section 3 of 4

Processing Procedure

A.

1. Mix dry ingredients
2. Chill pork 38°F
3. Rub ingredients on bellies, stack tightly in a box
4. In 2 days if not covered with natural brine add the following brine:

brine
0.9 lbs. salt
0.19 oz. nitrite
0.35 lbs. salt
1 gal water

5. Cure 1 day/lb
6. Shower
7. 135°F, smokehouse, damper open until dry
8. 135°F, smoke, damper 1/4 open to an internal temperature of 128°F
9. 120°F and smoke to desired color
10. Chill 36°F, 18 hrs.
11. Slice

B.

1. Chill pork 27°F
2. Mix dry ingredients
3. Rub with curing mix
4. Cure, 5 days, 38°F
5. Shower
6. Dry
7. Smoke
8. Cook to internal temperature of 120°F
9. Room temperature to internal temperature of 100°F
10. Chill, 34°F

Cooking Form

Section 4 of 4

1. Bacon comb

BARBECUE, BEEF OR PORK

Average Values

Section 1 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Ribs, bone in	45	28	14	—	—	—	100						
Trim 90 (lean)	71	11	18	28	27	43		100					
Pork													
Ribs, bone in	32	20	9	—	—	—			100				
Trim 80 (lean)	60	23	16	25	16	25				100	100	100	100
Dry Ingredients													
Corn starch	12	1	0	0	20	0	1.5		2				
Hydrolyzed Veg. Protein (HVP)	10	0	31	0	20	0	0.25						
MSG	0	0	0	0	0	0				0.13			
Salt	.01	0	0	0	40	0	0.5	0.2	0.2	0.4	0.4	0.2	0.2
Starch	12	1	0	0	30	0	2						
Sugar, brown	2	0	0	0	0	0		0.5				1.2	0.2
Sugar (sucrose)	.06	0	0	0	10	0	2		2	0.2			
Moist Ingredients													
Butter or oil	15	81	1	0	0	1		5		4	2	5	5
Water or ice	100	0	0	0	0	0	2	5	4		4.5	5	4
Worcestershire sauce	62	1	6	0	0	90		5	0.25			0.6	0.3
Fruit & Vegetables													
Catsup	69	1	2	0	0	80		2					6
Garlic, fresh	61	0	6	0	0	0					0.06		
Lemon juice	91	0	1	0	0	0				0.7	0.7	4	
Olive	78	13	1	0	0	0					1.2		
Onion	89	0	1	0	0	0		2					
Tomato paste	75	1	3	0	0	90	16		12				
Calculated composition 15% shrink													
Moisture							38.6	63.9	26.7	50.7	54.1	53.1	52.6
Fat							26.7	14.9	19.7	29.3	26.8	27.4	27.6
Protein							13.8	18.1	9.2	17.9	17.3	16.4	16.5

BARBECUE, BEEF OR PORK

Average Values

Section 2 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							II	I					
Pork													
Trim 80 (lean)	60	23	16	25	16	25	100	100					
Dry Ingredients													
Salt	.01	0	0	0	40	0	0.2						
Sugar, brown	2	0	0	0	0	0		0.6					
Moist Ingredients													
Butter or oil	15	81	1	0	0	1	2						
Water or ice	100	0	0	0	0	0	3	3					
Worcestershire sauce	62	1	6	0	0	90	1	0.6					
Fruit & Vegetables													
Catsup	69	1	2	0	0	80		5					
Onion	89	0	1	0	0	0	0.5	2.5					
Calculated composition 15% shrink													
Moisture							53.3	55.1					
Fat							27.2	24.3					
Protein							17.7	17.0					

BARBECUE, BEEF OR PORK

Average Values

Section 3 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Basil	6	4	14	0.5							
Caramel color	0	0	0		4	1					
Celery seed	6	25	18				1				
Chili powder	8	12	14					4.8	3.2		
Chili sauce	94	0	1							8	
Garlic, Powder	6	1	17			2			0.2		
Liquid smoke	80	0	0		4						
Maple flavor	35	0	0	0.5							
Marjoram	4	7	11	0.5							
Mustard, prepared	80	4	5				5	10		1	
Onion powder	5	1	10			4					
Paprika	10	13	15	1				1			1
Pepper black	11	8.5	12			1				0.5	0.5
Pepper, red	8	17	12								0.2
Tarragon	8	7	23	2							
Vinegar	94	0	0	5	24		16	11	3	32	64

Average Values

Section 4 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9							
Spices											
Pepper black	11	8.5	12	1							
Thyme	8	7	9	1							

BARBECUE, BEEF OR PORK

Section 5 of 6

Processing Procedure

A.

1. Boil meat in salt water
2. Cool
3. Dip meat in sauce
4. Cook, 200°F, 1 hr
5. Chill, 34°F

Cooking Form

Section 6 of 6

1. Kettle

BARBECUE, LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							A	B	C	D	E	
Meat block												
Beef												
Cooked beef	63	5	31	34	16	42	100					
Cooking broth beef	99	0	1	0	0	0		20				
Cured beef	58	30	12	30	18	30			100			
Trim 90 (lean)	71	11	18	28	27	43		100				
Trim 70	55	30	15	39	20	31				20		
Pork												
Cheek meat	67	15	17	72	9	29					80	
Heart	73	10	15	27	6	32					10	
Liver	73	7	19	24	2	49					10	
Trim 80 (lean)	60	23	16	25	16	25				80		
Dry Ingredients												
Caseinate	10	0	90	0	40	0				5		
Gelatin	13	0	85	0	20	0		2.7	2		3.5	
Non-fat dry milk	3	1	38	0	25	0			3		12	
Salt	.01	0	0	0	40	0	1.5	1.4	2	2.75	2.5	
Sugar, brown	2	0	0	0	0	0	5					
Sugar (sucrose)	.06	0	0	0	10	0		1.4				
Textured veg. protein	8	1	50	0	35	0	17					
Moist Ingredients												
Oil	0	100	0	0	0	0	3					
Water or ice	100	0	0	0	0	0	34			20		
Worcestershire sauce	62	1	6	0	0	90		0.1	2.75			
Fruit & Vegetables												
Catsup	69	1	2	0	0	80	64		2		18.7	
Celery, fresh ground	94	0	1	0	0	0	22					
Onion	89	0	1	0	0	0	8.5		0.15			
Tomato paste	75	1	3	0	0	90		3.5				
Calculated composition 4% shrink												
Moisture							65.6	71.5	53.1	60.7	58.3	
Fat							3.6	8.9	27.9	19.9	10.7	
Protein							16.8	16.6	14.0	16.6	19.0	
Properties												
% Collagen (Max. 35)							25.6	24.5	23.9	21.5	*42.7	
Bind Points (Min. 1.8)							3.2	4.3	2.6	3.6	2.4	
Color Points (Min. 2)							5.7	6.3	3.5	3.4	4.3	

BARBECUE, LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1	2	3	4			
Curing Ingredients										
Na or K Nitrite	0.1	0	0	0.25						
Na Ascorbate	0.1	0	0		0.87					
Na Erythorbate	0.1	0	0	0.87						
Spices										
Celery seed	6	25	18		0.1					
Cinnamon	10	3	4		0.1					
Cloves	7	22	6		0.1					
Garlic, Powder	6	1	17		0.05					
Ginger	9	4	8.5		0.1					
Mace	8	30	7		0.05					
Mustard, prepared	80	4	5			11				
Onion powder	5	1	10		0.7					
Pepper, red	8	17	12	3	0.7		3			
Pepper, white	11	8.5	1.3				3			
Vinegar	94	0	0		4.8	112				

BARBECUE, LOAF

Section 3 of 4

Processing Procedures

A.

1. Grind pork, 1/2" plate
2. Chop beef and water
3. Mix all ingredients for 15 minutes
4. Stuff into molds and cook to 155°F internal temperature
5. Chill to 40°F
6. Remove from molds
7. Paint outside with water and paprika paste

B.

1. Cube
2. Water cook
3. Grind, 1-1/2"
4. Mix with cooking stock

Cooking Form

Section 4 of 4

1. Molds

BEEF, DRIED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
							A	B						
Meat block														
Beef														
Round	73	5	21	20	27	45	100	100						
Dry Ingredients														
Salt	.01	0	0	0	40	0	9.2	3						
Sugar (sucrose)	.06	0	0	0	10	0	2	1						
Moist Ingredients														
Water or ice	100	0	0	0	0	0	38	3						
Calculated composition 30% shrink														
% Pump							15	dry						
Moisture							63.4	58.6						
Fat							4.8	6.7						
Protein							20.1	28.0						

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat										
				1	2									
Curing Ingredients														
Na or K Nitrite	0.1	0	0	1	0.25									
Na or K Nitrate	0.1	0	0	1	1									
Na Erythorbate	0.1	0	0		0.87									

BEEF, DRIED

Section 3 of 4

Processing Procedures

- A.
 - 1. Section round into inside, outside and knuckle
 - 2. Chill meat, 38°F
 - 3. Submerge, 7 day/pound in brine
 - 4. Soak
 - 5. Dry
 - 6. Smoke, 130°F
 - 7. Cook, 120°F, to 65% of cured weight
 - 8. Cool
 - 9. Thin slice
- B.
 - 1. Grind 10%, 1/4"
 - 2. Mix 3% ice
 - 3. Regrind, 1/16"
 - 4. Grind 90%, 1-1/2"
 - 5. Mix
 - 6. Cure, 4 days, 36°F
 - 7. Mix
 - 8. Stuff
 - 9. Flatten
 - 10. Water cook, to internal temperature of 150°F
 - 11. Smoke
 - 12. Chill

Cooking Form

Section 4 of 4

- 1. Fibrous casing

BEEF LOAF

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	
Meat block													
Beef													
Cheek meat	70	20	18	59	14	48							
Chuck	66	16	18	30	24	38	100						
Cooking broth beef	99	0	1	0	0	0		50					
Plate	41	40	18	42	16	25		25					
Round	73	5	21	20	27	45			100				
Trim 85	66	15	18	28	26	41		75		100	100	100	
Other Meats or Mixtures or Undesignated													
Bouillon cube	1	3	20	0	0	20	0.87						
Dry Ingredients													
Gelatin	13	0	85	0	20	0	5		3	2	2		
MSG	0	0	0	0	0	0	0.12		0.12			0.12	
Non-fat dry milk	3	1	38	0	25	0		12					
Salt	.01	0	0	0	40	0	2	3	1.5	2.5	2	3.25	
Sugar, brown	2	0	0	0	0	0				1	0.75	1	
Sugar (sucrose)	.06	0	0	0	10	0			0.25				
Moist Ingredients													
Water or ice	100	0	0	0	0	0	50		25				
Worcestershire sauce	62	1	6	0	0	90		0.2					
Fruit & Vegetables													
Catsup	69	1	2	0	0	80		10					
Onion	89	0	1	0	0	0		2					
Calculated composition 5% shrink													
Moisture							*72.5	65.1	74.5	60.9	61.3	61.3	
Fat							10.7	12.8	4.1	15.0	15.1	15.1	
Protein							14.9	13.8	19.1	19.7	19.8	18.2	
Properties													
% Collagen (Max. 35)							24.1	24.4	17.8	25.5	25.6	27.9	
Bind Points (Min. 1.8)							3.4	3.2	5.0	5.0	5.0	4.7	
Color Points (Min. 2)							4.6	4.1	7.7	7.4	7.4	7.4	

BEEF LOAF

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6		
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na Erythorbate	0.1	0	0	0.87							
Spices											
Bay leaves	5	8	8			2					
Celery seed, ground	6	25	18		2		2	2			
Onion powder	5	1	10				4				
Pepper black	11	8.5	12	6				8	4		
Pepper, white	11	8.5	1.3		4	8	3				

Processing Procedures

Section 3 of 5

- A.
 1. Cube meat
 2. Add broth to cover
 3. Add seasoning
 4. Cook till tender
 5. Mix
 6. Chill
 7. Coat with fat
 8. Stuff
- B.
 1. Bone beef in 5 lbs. pieces
 2. Sprinkle with MSG, salt, pepper
 3. Roast 375°F for 3 hrs.
 4. Cool
 5. Cube
 6. Dissolve bouillon and gelatin, 160°F
 7. Mix
 8. Stuff
 9. Cool

BEEF LOAF

Section 4 of 5

Processing Procedures

- C.
 - 1. Grind meat, 1/2"
 - 2. Cover with water
 - 3. Boil
 - 4. Drain
 - 5. Mix other ingredients with 25 pounds of broth
 - 6. Mix
 - 7. Boil, 4 min.
 - 8. Place in pans
 - 9. Chill, 18 hrs, 34°F
- D.
 - 1. Cook beef until tender
 - 2. Cube beef
 - 3. Mix
 - 4. Mold
- E.
 - 1. Grind 90 pounds beef, 1" plate
 - 2. Grind 10 pounds beef 3/16" plate
 - 3. Mix all ingredients
 - 4. Stuff
 - 5. Cook to an internal temperature of 155°F
 - 6. Chill to 28°F
 - 7. Slice
- F.
 - 1. Cube beef
 - 2. Soak with H₂O and nitrite, 2 hours
 - 3. Cook at 175°F
 - 4. Add seasoning
 - 5. When tender add gelatin
 - 6. Mix
 - 7. Cool
 - 8. Coat with fat
 - 9. Stuff

Cooking Form

Section 5 of 5

- 1. Loaf pan
- 2. Mold

BEEF PATTY

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Beef													
Trim 85	66	15	18	28	26	41	50	37					
Trim 50	38	50	11	42	12	19		38					
Trim 40	27	65	7	36	8	14	50						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.5	0.7					
Hydrolyzed Veg.													
Protein (HVP)	10	0	31	0	20	0	0.25	0.5					
Salt	.01	0	0	0	40	0	0.5	0.8					
Textured veg. protein	8	1	50	0	35	0		10					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	3	15					
Calculated composition 1% shrink													
Moisture							47.0	53.2					
Fat							*38.8	24.4					
Protein							12.2	15.8					
Properties													
% Collagen (Max. 35)							30.0	22.7					
Bind Points (Min. 1.8)							2.6	4.0					
Color Points (Min. 2)							4.1	3.5					

BEEF PATTY

Average Values

Section 2 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Spices											
Celery seed, ground	6	25	18	0.25							
Nutmeg	8	33	7	0.25							
Onion chips	4	1	9	2.5	1						
Onion powder	5	1	10	1.5							
Pepper, black decorticated	11	9	1	3.5							
Pepper, white	11	8.5	1.3		2						

Cooking Form

Section 3 of 3

1. Formed

BEEF SAUSAGE

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C				
Beef													
Brisket	65	15	18	40	12	19	25						
Chuck	66	16	18	30	24	38	75	75					
Flank	43	42	13	24	12	20			35				
Navels	40	50	10	42	14	21			30				
Plate	41	40	18	42	16	25			35				
Trim 50	38	50	11	42	12	19		25					
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.5	0.5					
Salt	.01	0	0	0	40	0	3	3	2.5				
Sugar (sucrose)	.06	0	0	0	10	0			1				
Moist Ingredients													
Water or ice	100	0	0	0	0	0			5				
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.12	0.12					
Calculated composition 1% shrink													
Moisture							63.2	56.6	42.2				
Fat							15.4	23.9	*40.7				
Protein							17.6	15.8	12.9				
Properties													
% Collagen (Max. 35)							32.4	32.1	*36.1				
Bind Points (Min. 1.8)							3.7	3.5	1.8				
Color Points (Min. 2)							5.8	5.5	2.9				

BEEF SAUSAGE

Average Values

Section 2 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3					
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0	0.5	0.5						
Spices											
Coriander	5	18	15	1.5							
Ginger	9	4	8.5			1					
Nutmeg	8	33	7		2	1					
Paprika	10	13	15	3	10						
Pepper, white	11	8.5	1.3	6	6	4					
Sage, rubbed	8	13	11			1					
Thyme	8	7	9			1					

Processing Procedure

Section 3 of 3

A.

1. Chill beef, 28°F
2. Grind 3/8" plate
3. Mix
4. Regrind 1/8" plate
5. Stuff
6. Chill

Cooking Forms

1. Collagen casing
2. Natural casing
3. Formed

BERLINER

Average Values							Section 1 of 4						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D			
Beef													
Chuck	66	16	18	30	24	38	20						
Cured beef	58	30	12	30	18	30		25					
Trim 65	50	35	14	39	18	28			15	15			
Veal													
Lean	69	10	19	27	26	30	20						
Pork													
Cheek meat	67	15	17	72	9	29	30						
Cured	57	28	13	31	14	20		75	85				
Trim 80 (lean)	60	23	16	25	16	25	30			85			
Dry Ingredients													
Dextrose	.06	0	0	0	10	0		0.5	0.5				
Non-fat dry milk	3	1	38	0	25	0	4						
Salt	.01	0	0	0	40	0	3	2.5	2.5	2.5			
Sugar (sucrose)	.06	0	0	0	10	0				0.25			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	8						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.06					
Onion	89	0	1	0	0	0		1.5					
Calculated composition 5% shrink													
Moisture							61.8	53.8	51.9	54.7			
Fat							15.2	28.7	29.7	25.4			
Protein							17.2	12.9	13.4	16.1			
Properties													
% Collagen (Max. 35)							*36.9	30.6	32.4	26.8			
Bind Points (Min. 1.8)							2.3	1.9	2.0	2.6			
Color Points (Min. 2)							4.7	2.9	2.9	4.1			

BERLINER

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3					
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.125	0.125						
Na or K Nitrate	0.1	0	0	3	1						
Spices											
Cinnamon	10	3	4			0.5					
Cloves	7	22	6			0.75					
Maple flavor	35	0	0		2	2.5					
Pepper black	11	8.5	12			6					
Pepper, white	11	8.5	1.3		7						

Processing Procedures

Section 3 of 4

- A.
1. Pork, coarse grind
 2. Beef, fine grind
- B.
1. Coarse grind
 2. Mix
 3. Stuff
 4. 18 hours at 36°F
 5. Room temperature, 2 hrs
 6. Scalding water shower
 7. Smoke at 120°F, 1 hour
 8. Smoke at 145°F, for 3 hours
 9. Cook 160°F water, 4-6 hrs.
- C.
1. Grind pork trim, 1/4"
 2. Grind rest, 1/8"
 3. Mix
 4. Cure, 36°F, 48 hrs.
 5. Hold, 70°F, 3 hrs
 6. Smoke
 7. Cook to internal temperature of 155°F
 8. Shower

Cooking Forms

Section 4 of 4

1. Extra wide beef middles
2. Cellulose casing
3. Fibrous casing

BILTONG (Dried Meat)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Beef													
Bull F.C.	70	10	20	20	30	47	100						
Cow F.C.	68	14	18	21	24	39		100					
Dry Ingredients													
Salt	.01	0	0	0	40	0	4	4					
Calculated composition 40% shrink													
Moisture							45.5	42.3					
Fat							16.0	22.4					
Protein							32.1	28.8					

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat									
				1									
Curing Ingredients													
Na or K Nitrate	0.1	0	0	1									
Spices													
Chilies	10	17	12	2									
Pepper black	11	8.5	12	6									

BILTONG (Dried Meat)

Section 3 of 4

Processing Procedure

A.

1. Chill meat
2. Cut into strips, maximum 1/2"
3. Rub salt onto strips and cure 18 hours
4. Pepper, chillies, saltpeter are often added to salt
5. Dry in a dry atmosphere
6. Reverse hanging ends daily
7. Dry to a uniform structure
8. Smoke increases resistance to insects
9. Protect from insects and moisture
10. Soak when ready to use or it may be consumed dry and raw

Cooking Form

Section 4 of 4

1. Bacon comb
2. Meat hooks

BLOOD AND TONGUE SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	
Beef													
Trim 65	50	35	14	39	18	28	11.3						
Pork													
Backfat, cubed	5	93	1	95	0	0	26.3	45	13	10	9	5	
Heart	73	10	15	27	6	32	11.3						
Skin, 0.75 grind	40	32	28	99	6	1	11.3	15		15	10	7.1	
Snout	45	40	14	80	2	1				30		59.3	
Tongue	63	19	17	66	8	36		30					
Tongue, cured (or beef)	65	17	16	58	8	45	22.6		75	30	70	21.4	
Trim Reg	34	58	8	36	10	8	11.3						
Other Meats or Mixtures or Undesignated													
Blood, cured	81	1	18	0	15	180	6	10	12	15	11	7.1	
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.5	2.2	0.5	2.25	0.5	2.5	
Fruit & Vegetables													
Onion	89	0	1	0	0	0			0.06				
Calculated composition 6% shrink													
Moisture							38.3	30.3	56.2	47.4	55.9	44.9	
Fat							*45.2	*54.6	26.4	*32.6	25.0	*35.7	
Protein							12.8	12.0	15.1	16.6	17.0	15.6	
Properties													
% Collagen (Max. 35)							*55.7	*69.0	*49.6	*65.2	*58.2	*70.9	
Bind Points (Min. 1.8)							*1.2	*1.0	*1.4	*1.2	*1.4	*0.78	
Color Points (Min. 2)							4.8	5.3	9.8	7.4	9.1	4.1	

BLOOD AND TONGUE SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6		
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0			0.7	0.7				
Spices											
Allspice	8.5	8.7	6					2	1		
Cloves	7	22	6	1	0.5				0.5		
Ginger	9	4	8.5					1			
Mace	8	30	7		0.5	1.5	1.5	2			
Marjoram	4	7	11	3	1	0.75	0.75				
Onion powder	5	1	10	1		1					
Pepper black	11	8.5	12		5	2	2	6			
Pepper, red	8	17	12	1							
Pepper, white	11	8.5	13	6					4		
Thyme	8	7	9		0.5			1			

BLOOD AND TONGUE SAUSAGE

Section 3 of 4

Processing Procedure

- A.
 - 1. Wash and cut tongue into strips
 - 2. Mix
 - 3. Stuff
 - 4. Cook to 150°F internal temperature
 - 5. Chill in ice water to 40°F internal temperature
- B.
 - 1. Cook tongue and snout, cool, 2 hrs
 - 2. Grind, 1/2" plate
 - 3. Grind, skins 1/8" plate
 - 4. Dice, pork fat 1/4"
 - 5. Scald, pork fat 5 sec.
 - 6. Mix
 - 7. Stuff into bungs
 - 8. Cook, 195°F in water to internal temperature of 152°F
 - 9. Cool, in ice water to 110°F
 - 10. Chill, 18 hours, 36°F
- C.
 - 1. Cube fat, scald 30 seconds.
 - 2. Cook meat till tender, cube
 - 3. Cook rinds till tender, grind
 - 4. Mix
 - 5. Place tongue in casing and stuff around it
 - 6. Cook, 3 hrs at 180°F
 - 7. Cool
 - 8. Cold smoke
- D.
 - 1. Cure tongues
 - 2. Place 2 or 3 per casing
- E.
 - 1. Dice back fat and scald
 - 2. Cook pork rinds and mince
 - 3. Cook and dice tongues
 - 4. Cook blood
 - 5. Mix hot
 - 6. Stuff
 - 7. Water cook
 - 9. Chill

Cooking Forms

Section 4 of 4

- 1. Pork bung
- 2. Synthetic casing
- 3. Beef bungs

BLOOD HEAD CHEESE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Pork													
Checkmeat, cured	67	15	17	72	7	25	28						
Rind, pickled	40	32	28	99	6	1	12						
Snout, pickled	45	40	14	80	2	1	60						
Other Meats or Mixtures or Undesignated													
Blood, cured	81	1	18	0	15	180	10						
Cooking broth	99	0	1	0	0	5	7						
Dry Ingredients													
Salt	.01	0	0	0	40	0	1.25						
Calculated composition 8% shrink													
Moisture							51.6						
Fat							29.5						
Protein							16.9						
Properties													
% Collagen (Max. 35)							*73.3						
Bind Points (Min. 1.8)							*0.9						
Color Points (Min. 2)							4.2						

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat									
				1									
Spices													
Allspice	8.5	8.7	6	1									
Cloves	7	22	6	0.25									
Onion powder	5	1	10	3.5									
Pepper black	11	8.5	12	4									

BLOOD HEAD CHEESE

Section 3 of 4

Processing Procedure

A.

1. Cook till tender in 165°F water
2. Wash
3. Cut, grind rinds
4. Mix hot
5. Stuff
6. Cook, 2 hrs at 165°F
7. Chill

Cooking Forms

Section 4 of 4

1. Cellulose casing
2. Natural casing
3. Mold

BLOOD SAUSAGE

Average Values

Section 1 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Blood, strained	90	1	7	0	15	15	66.7	28.6	20	20	20	16.7	15
Lip, cured	66	17	17	90	0	1			12				
Shank	71	7	21	48	28	46				25			
Trim 65	50	35	14	39	18	28		35.7					
Pork													
Backfat, cubed	5	93	1	95	0	0	33.3		10			41.7	35
Cheek meat	67	15	17	72	9	29							10
Heart	73	10	15	27	6	32							15
Jowl, skinned	24	71	5	43	5	2				20	20		
Lips	71	14	15	90	1	1							5
Skin	40	32	28	99	6	1			10	15	20		25
Snout	45	40	14	80	2	1			35	20			
Tongue	63	19	17	66	8	36					40		
Trim 80 (lean)	60	23	16	25	16	25						41.7	
Trim 50	36	52	10	34	12	9		35.7					
Tripe	74	15	10	100	0	0			12				
Dry Ingredients													
Barley	11	1	9	0	12	0		2.8					
MSG	0	0	0	0	0	0			0.25			0.25	
Non-fat dry milk	3	1	38	0	25	0			3.5				
Rye flour	11	2	12	0	16	0	50						
Salt	.01	0	0	0	40	0	3.3	2	3	2	3	3	2.0
Sugar (sucrose)	.06	0	0	0	10	0							0.5
Moist Ingredients													
Molasses	24	0	0	0	18	20	3						
Fruit & Vegetables													
Onion	89	0	1	0	0	0		1					0.2
Calculated composition 8% shrink													
Moisture							38.5	50.5	48.0	50.5	50.4	35.6	38.4
Fat							22.7	*32.2	*31.4	*30.9	30.0	*51.0	*44.8
Protein							7.7	11.1	14.2	15.6	15.6	8.7	13.2
Properties													
% Collagen (Max. 35)							2.9	29.3	*71.1	*63.9	*70.8	24.9	*74.7
Bind Points (Min. 1.8)							*1.2	*1.7	*0.8	2.2	*1.2	*1.3	*0.9
Color Points (Min. 2)							*0.49	2.1	*0.3	2.9	2.9	*1.9	*1.5

BLOOD SAUSAGE

Average Values

Section 2 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Blood, strained	90	1	7	0	15	15	15	15	10	9.1	9.1	9.1	8
Trim 75	58	25	16	38	22	34							15
Pork													
Backfat, cubed	5	93	1	95	0	0	10						35
Bacon, raw	35	55	8	86	0	3		70					
Heart	73	10	15	27	6	32							15
Jowl, skinned	24	71	5	43	5	2			20				
Skin	40	32	28	99	6	1	15	15	25	11.4	11.4	11.4	15
Snout	45	40	14	80	2	1	30		25	56.8	56.8	56.8	
Tongue	63	19	17	66	8	36	30		20	22.7	22.7	22.7	
Trim 50, cured	36	52	10	34	10	7							20
Other Meats or Mixtures or Undesignated													
Rework	56	30	12	31	8	20				5			
Dry Ingredients													
Barley	11	1	9	0	12	0					20		
Buckwheat, groat	11	2	12	0	10	0				20		20	
Salt	.01	0	0	0	40	0	3.0	1.0	3.0	2.5	2.5	2.5	3.5
Calculated composition 8% shrink													
Moisture							46.6	38.7	41.6	40.4	39.9	39.9	28.6
Fat							*33.7	*46.8	*38.1	27.9	27.5	27.7	*51.7
Protein							15.5	11.7	16.5	15.9	15.5	16.0	11.5
Properties													
% Collagen (Max. 35)							*74.7	*82.5	*79.3	*65.7	*69.1	*66.9	*56.7
Bind Points (Min. 1.8)							*1.0	*0.4	*1.0	*0.89	*0.86	*0.88	*1.1
Color Points (Min. 2)							2.2	*0.4	*1.5	*1.5	*1.4	*1.4	*1.8

BLOOD SAUSAGE

Average Values

Section 3 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.2	0.1					
Na or K Nitrate	0.1	0	0			0.5	2				
Na Erythorbate	0.1	0	0		0.87	0.87					
Spices											
Allspice	8.5	8.7	6	1.5			1	3	1	1	1
Caraway seeds	10	15	20			0.2					
Celery seed, ground	6	25	18					1			
Cinnamon	10	3	4		4			3			
Cloves	7	22	6			0.5			1.5	0.5	0.25
Mace	8	30	7		1	0.5					
Marjoram	4	7	11	2	4	1.5	0.75		0.75		
Onion, granulated	4	1	9		16						
Onion powder	5	1	10	5				1			
Pepper black	11	8.5	12		4	2.5					4
Pepper, white	11	8.5	1.3				6	4	6	3	
Sage	3	14	8.5		4						
Savory	9	6	7							1.5	
Thyme	8	7	9			0.5					

Average Values

Section 4 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9							
Spices											
Mace	8	30	7	0.5							
Onion powder	5	1	10	6.5							
Pepper, white	11	8.5	1.3	3							
Thyme	8	7	9	0.5							

BLOOD SAUSAGE

Section 5 of 7

Processing Procedures

- A.
 - 1. Cook all meat 2 hrs and cool
 - 2. Grind 3/16" plate
 - 3. Cook groats or barley in water 2 hrs until volume is doubled, cool
 - 4. Mix
 - 5. Stuff into beef bungs or middles
 - 6. Cook in 160°F water until internal temperature of 152°F
 - 7. Shower to internal temperature of 110°F
 - 8. Chill 24 hours at 36 - 38°F
- B.
 - 1. Cook meat at 165°F until tender
 - 2. Cube and scald fat for 30 seconds
 - 3. Grind meat
 - 4. Mix
 - 5. Stuff
 - 6. Cook
- C.
 - 1. Cook meat at 165°F in nets until tender
 - 2. Grind meat
 - 3. Cube fat
 - 4. Strain blood
 - 5. Mix
 - 6. Stuff
 - 7. Cook 3 hours at 160°F
 - 8. Cool
- D.
 - 1. Grind
 - 2. Mix
 - 3. Roll into balls
 - 4. Boil in saltwater to internal temperature of 160°F
 - 5. Cool, room temperature, 3 hours
 - 6. Chill, 36°F

BLOOD SAUSAGE

Section 6 of 7

Processing Procedures

E.

1. Cure all meat items
2. Grind meat and onions, 1/4"
3. Grind skin, 1/8"
4. Chop
5. Stuff
6. Water cook to internal temperature of 170°F
7. Chill, cold water
8. Chill, 36°F
9. Smoked, cold
10. Refrigerate

F.

1. Blanch backfat, 60 sec.
2. Strain blood and mix with nitrate
3. Cook, cheeks, lips, heart and grind
4. Cook skin until tender and grind (save 2 gal of broth and add to mixture)
5. Mix
6. Stuff
7. Water cook to internal temperature of 150°F

G.

1. Cook meat, 165°F until tender
2. Cube and scald fat, 30 seconds.
3. Grind meat
4. Mix
5. Stuff
6. Cook, 1 hour at 180°F
7. Chill
8. Cold smoke

Cooking Forms

Section 7 of 7

1. Beef round
2. Beef bung
3. Polyethylene lined molds
4. Beef middles

BOCKWURST (White Sausage)

Average Values							Section 1 of 6						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Trim 90 (lean)	71	11	18	28	27	43	60	60					
Trim 85	66	15	18	28	26	41			25				
Veal													
Lean	69	10	19	27	26	30			40	60	60	30	
Lean 65%	50	35	14	38	30	20							50
Pork													
Backfat	5	93	1	95	0	0						20	
Trim 80 (lean)	60	23	16	25	16	25			15			50	
Trim Reg	34	58	8	36	10	8	40	40	20	40	40		50
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	2		0.5	2			0.5
MSG	0	0	0	0	0	0							0.4
Non-fat dry milk	3	1	38	0	25	0	3.5	3.5	4.7	3.5	3.5		
Salt	.01	0	0	0	40	0	2.5	2.5	1	2.5	2.5	1	1
Sugar (sucrose)	.06	0	0	0	10	0						3.2	
Moist Ingredients													
Corn syrup	20	0	0	0	5	0		2			2		
Egg	74	12	13	0	0	1	4	4	3.2	4	4	3.2	
Milk	87	3	4	0	0	0			8.3				8
Water or ice	100	0	0	0	0	0	25	25		25	25		
Fruit & Vegetables													
Celery, fresh ground	94	0	1	0	0	0							0.1
Onion	89	0	1	0	0	0							4
Parsley, chopped	85	1	4	0	0	0				0.75			2
Calculated composition 10% shrink													
Moisture							57.2	57.6	54.6	56.4	56.6	44.8	40.9
Fat							24.6	24.6	22.2	24.0	24.1	*34.6	*44.8
Protein							12.9	12.9	17.6	13.3	13.3	14.8	11.0
Properties													
% Collagen (Max. 35)							26.3	26.3	24.1	25.0	25.1	26.1	*35.7
Bind Points (Min. 1.8)							2.9	2.9	3.9	*0.5	*0.5	2.9	*0.4
Color Points (Min.2)							4.0	4.0	4.6	3.0	3.0	3.8	*1.6

BOCKWURST (White Sausage)

Average Values

Section 2 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							H	I	J	K	L	
Meat block												
Beef												
Veal												
Lean 65%	50	35	14	38	30	20	50	50	50	35	30	
Pork												
Backfat	5	93	1	95	0	0					20	
Trim 80 (lean)	60	23	16	25	16	25					50	
Trim 50	36	52	10	34	12	9				65		
Trim Reg	34	58	8	36	10	8	50	50	50			
Dry Ingredients												
Dextrose	.06	0	0	0	10	0	0.5			0.25		
Non-fat dry milk	3	1	38	0	25	0	3	4		3		
Salt	.01	0	0	0	40	0	1	1	2.25	1	2.25	
Sugar (sucrose)	.06	0	0	0	10	0			0.5		0.5	
Moist Ingredients												
Egg	74	12	13	0	0	1		1.25		1.25		
Milk	87	3	4	0	0	0			8		8	
Fruit & Vegetables												
Celery, fresh ground	94	0	1	0	0	0	0.1	0.5	0.7		0.1	
Leeks	85	0	2	0	0	0		0.5				
Lemon peel	82	0	1	0	0	1	0.06		0.12	0.06		
Onion	89	0	1	0	0	0		0.75	1			
Parsley, chopped	85	1	4	0	0	0	0.06	0.2			0.06	
Calculated composition 10% shrink												
Moisture							33.8	34.9	38.8	33.1	42.1	
Fat							*49.4	*47.9	*46.1	*48.7	*40.9	
Protein							12.9	13.1	11.2	13.4	12.7	
Properties												
% Collagen (Max. 35)							33.7	32.1	*36.1	31.9	29.9	
Bind Points (Min. 1.8)							*0.7	3.0	*0.4	2.7	*1.3	
Color Points (Min. 2)							*1.8	*1.8	*1.7	*1.6	2.8	

BOCKWURST (White Sausage)

Average Values

Section 3 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1	2	3	4	5	6	7
Curing Ingredients										
Na or K Nitrite	0.1	0	0	0.25						
Na or K Nitrate	0.1	0	0	2.7						
Na Erythorbate	0.1	0	0		0.87					
Spices										
Allspice, soluble	0	0	0			1				
Bitters	3	14	8	1						
Cardamon	8	3.5	9				0.5			
Cardamon, soluble	0	0	0			1				
Chives	91	0	2			8		8	8	
Cinnamon	10	3	4			1				
Cloves	7	22	6					1		
Garlic, Powder	6	1	17			2				
Lemon Extract	20	5	0					0.2		
Mace	8	30	7		0.5			1.5	1	1
Onion powder	5	1	10		0.3				4	4
Pepper, white	11	8.5	1.3	7	1	6	7	6	4	5
Sage	3	14	8.5	1			0.75			
Thyme	8	7	9				0.75			

Processing Procedures

Section 4 of 6

A.

1. Grind meat, 1/8" plate
2. Chop meat, spices, eggs, 50°F
3. Add NFD, green vegetables, chop 55°F
4. Stuff
5. Steam cook at 160°F to internal temperature of 142°F
6. Chill, 40°F
7. Very perishable

BOCKWURST (White Sausage)

Section 5 of 6

Processing Procedures

B.

1. Grind meat, 1/8" plate
2. Mix
3. Stuff, 24-26 mm casing, link 6"
4. Water cook to internal temperature of 152°F
5. Shower to 110°F
6. Chill, 18 hrs, 38°F
7. Can be frozen and cooked as needed

C.

1. Store at 28.5°F
2. Sell fresh

D.

1. Chill meat to 34°F
2. Grind meat, 1/8"
3. Mix
4. Chill, 34°F, 18 hrs
5. Chop
6. Stuff
7. Shower
8. Chill, 26°F
9. Package

Cooking Forms

Section 6 of 6

1. Hog casing, 4 inch link
2. Sheep casing
3. A 1 lb. cellulose casing
4. A 24-26 mm casing, 4 inch link

BOHEMIAN SAUSAGE

Average Values							Section 1 of 1						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Pork													
Cheek meat	67	15	17	72	9	29	15						
Trim 80 (lean)	60	23	16	25	16	25	75						
Trim 15 (fat)	11	85	3	60	3	1	10						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.4						
Salt	.01	0	0	0	40	0	2.25						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.25						
Calculated composition 7% shrink													
Moisture							51.3						
Fat							29.3						
Protein							15.5						
Properties													
% Collagen (Max. 35)							33.8						
Bind Points (Min. 1.8)							2.3						
Color Points (Min. 2)							3.9						

BOLOGNA

Average Values

Section 1 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Brisket	65	15	18	40	12	19	35						
Bull F.C.	70	10	20	20	30	47	40	70	60	60	60	60	60
Heart	70	13	17	27	6	40			20				
Trim 40	27	65	7	36	8	14		30					
Veal													
Lean	69	10	19	27	26	30	25						
Pork													
Cheek meat	67	15	17	72	9	29				20			
Heart	73	10	15	27	6	32					20		
Snout	45	40	14	80	2	1			20		20		
Trim 50 cured	36	52	10	34	10	7						40	
Trim Reg	34	58	8	36	10	8							40
Trim 15 (fat)	11	85	3	60	3	1				20			
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0						2	
MSG	0	0	0	0	0	0		0.25					
Non-fat dry milk	3	1	38	0	25	0	5		3.5		3.5		
Plant protein hydrolysate	8	0	30	0	20	0		0.1					
Salt	.01	0	0	0	40	0	3	2.75	3	2.75	3	3	3
Soy protein concentrate	8	0	75	0	45	0				3.5			
Sugar (sucrose)	.06	0	0	0	10	0	0.5						1
Moist Ingredients													
Water or ice	100	0	0	0	0	0	25	10	10	10	10	30	40
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0				0.12			
Onion	89	0	1	0	0	0				2			
Calculated composition 4% shrink													
Moisture							68.5	57.6	63.0	57.2	63.5	*62.6	*65.0
Fat							9.2	24.4	14.9	22.8	14.3	20.7	21.1
Protein							16.3	14.9	17.5	16.4	17.1	12.3	11.0
Properties													
% Collagen (Max. 35)							25.9	22.0	28.4	27.9	28.5	23.6	23.4
Bind Points (Min. 1.8)							3.8	4.0	3.7	4.5	3.7	3.1	2.8
Color Points (Min. 2)							5.0	6.3	6.3	5.8	5.9	4.6	4.3

BOLOGNA

Average Values							Section 2 of 16						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Beef													
Bull F.C.	70	10	20	20	30	47	60	60	55	50	40	40	30
Cheek meat	70	20	18	59	14	48							30
Trim 50	38	50	11	42	12	19					20		
Trim 40	27	65	7	36	8	14						20	
Pork													
Cheek meat	67	15	17	72	9	29					15	15	10
Heart	73	10	15	27	6	32							30
Trim 80 (lean)	60	23	16	25	16	25			20				
Trim Reg	34	58	8	36	10	8	40	40		50	25	25	
Trim 15 (fat)	11	85	3	60	3	1			25				
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0					2		
Non-fat dry milk	3	1	38	0	25	0				3.5		3.5	3.5
Salt	.01	0	0	0	40	0	3	2.5	2.75	2.75	3	2.75	2.75
Soy protein concentrate	8	0	75	0	45	0			3.5				
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20	20	10	10	30	10	10
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0						0.06	
Onion	89	0	1	0	0	0						2.5	
Calculated composition 4% shrink													
Moisture							59.6	59.9	52.8	51.5	*60.8	52.2	68.1
Fat							24.6	24.7	28.1	*30.5	23.7	29.6	12.1
Protein							12.8	12.9	15.7	13.7	11.4	13.4	17.0
Properties													
% Collagen (Max. 35)							23.4	23.3	19.7	22.5	34.4	30.5	*36.0
Bind Points (Min. 1.8)							3.3	3.3	4.5	3.3	2.4	2.9	3.0
Color Points (Min. 2)							5.0	5.0	5.4	4.5	3.9	4.3	6.6

BOLOGNA

Average Values

Section 3 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	Q	R	S	T	U
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	30	30	30	30	30	20	
Check meat	70	20	18	59	14	48						20	25
Cow F.C.	68	14	18	21	24	39							30
Heart	70	13	17	27	6	40	20						10
Trim 90 (lean)	71	11	18	28	27	43		30					
Trim 80	63	20	17	30	24	39			30				
Trim 70	55	30	15	39	20	31				35			
Trim 50	38	50	11	42	12	19					40		
Tripe, fresh	82	10	9	100	0	0						10	10
Veal													
Lean	69	10	19	27	26	30						20	
Pork													
Backfat	5	93	1	95	0	0							25
Heart	73	10	15	27	6	32	20						
Jowl, skinned	24	71	5	43	5	2	30				30		
Trim Reg	34	58	8	36	10	8		40	40	30		30	
Dry Ingredients													
Com syrup solids	3.5	0	0	0	5	0	2				2		
Dextrose	.06	0	0	0	10	0		1					
MSG	0	0	0	0	0	0			0.25				
Non-fat dry milk	3	1	38	0	25	0		4.7	5	5		5	
Salt	.01	0	0	0	40	0	3	3	2.5	2.5	3	3	3
Sugar (sucrose)	.06	0	0	0	10	0			0.4	0.5		0.5	1
Moist Ingredients													
Water or ice	100	0	0	0	0	0	30		20	20	30	25	30
Calculated composition 4% shrink													
Moisture							*62.9	49.5	55.7	55.6	*52.5	*62.4	*61.4
Fat							22.3	28.3	26.2	26.2	*34.2	20.6	27.0
Protein							10.7	15.7	13.2	13.2	9.2	13.0	9.9
Properties													
% Collagen (Max. 35)							25.8	23.6	23.9	26.4	31.0	34.3	42.3
Bind Points (Min. 1.8)							*1.7	3.9	3.1	3.0	1.9	2.7	*1.6
Color Points (Min. 2)							4.0	5.2	4.1	3.9	3.9	3.9	3.8

BOLOGNA

Average Values

Section 4 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							V	W	X	Y	Z	AA	AB
Beef													
Cheek meat	70	20	18	59	14	48	10						
Chuck	66	16	18	30	24	38		65	60	60			
Cow F.C.	68	14	18	21	24	39					60	60	50
Trim 90 (lean)	71	11	18	28	27	43	30						
Pork													
Trim 80 (lean)	60	23	16	25	16	25			20				
Trim 50	36	52	10	34	12	9	60						50
Trim Reg	34	58	8	36	10	8		35	20	40	40	40	
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	2				2		2
Dextrose	.06	0	0	0	10	0	1	1					1
Mustard, heat treated	6	25	31	0	16	5	1						1
Non-fat dry milk	3	1	38	0	25	0	3	5	5				3
Salt	.01	0	0	0	40	0	3	3	3	2.5	3	2.75	2
Soy protein concentrate	8	0	75	0	45	0						3.5	
Sugar (sucrose)	.06	0	0	0	10	0			0.5	0.5			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	25		25	20	30	10	22
Calculated composition 4% shrink													
Moisture							53.8	48.3	61.0	57.8	*61.0	53.8	54.9
Fat							28.4	29.4	20.2	27.8	24.4	28.3	26.5
Protein							11.3	15.7	13.7	11.4	10.8	14.9	12.3
Properties													
% Collagen (Max. 35)							31.5	27.5	26.3	32.6	24.4	20.6	23.2
Bind Points (Min. 1.8)							2.1	3.4	2.9	2.5	2.2	3.7	2.5
Color Points (Min. 2)							2.9	4.5	3.9	3.7	3.4	4.0	3.2

BOLOGNA

Average Values

Section 5 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							AC	AD	AE	AF	AG	AH	AI
Beef													
Cow F.C.	68	14	18	21	24	39	40	30	30				
Heart	70	13	17	27	6	40		20		27	27	8	8
Plate	41	40	18	42	16	25						22	22
Trim 90 (lean)	71	11	18	28	27	43						28	28
Trim 50	38	50	11	42	12	19	20		40				
Pork													
Backfat	5	93	1	95	0	0				10	10		
Check meat	67	15	17	72	9	29	15						
Heart	73	10	15	27	6	32		20					
Jowl, skinned	24	71	5	43	5	2		30	30			14	14
Plate	25	65	9	86	1	2				35	35		
Stomach	71	13	15	62	1	0				28	28		
Tongue	63	19	17	66	8	36						28	28
Trim Reg	34	58	8	36	10	8	25						
Dry Ingredients													
Corn syrup	20	0	0	0	5	0				2	2	3	3
Corn syrup solids	3.5	0	0	0	5	0	2	2	2				
Dextrose	.06	0	0	0	10	0				2	2	3	3
Isolated soy protein	8	0	90	0	40	0				2.5		4	
Salt	.01	0	0	0	40	0	3	3	3	2.5	2.5	3.4	3.4
Soy protein concentrate	8	0	75	0	45	0					4		5
Moist Ingredients													
Water or ice	100	0	0	0	0	0	30	30	30	25	25	38	36
Calculated composition 4% shrink													
Moisture							*60.2	*62.4	*52.1	53.1	52.5	60.8	59.9
Fat							25.0	23.2	*35.1	*30.5	*30.1	19.4	19.5
Protein							10.8	10.3	8.7	11.3	11.6	13.4	13.6
Properties													
% Collagen (Max. 35)							*35.7	26.3	32.2	*45.7	*44.1	*35.3	*35.1
Bind Points (Min. 1.8)							1.9	*1.4	*1.5	*1.0	*1.3	2.7	2.9
Color Points (Min. 2)							3.2	3.4	2.3	*1.5	*1.5	3.7	3.8

BOLOGNA

Average Values

Section 6 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AI	AK	AL	AM	AN	AO	AP
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	75	60	60	55	55		
Trim 85	66	15	18	28	26	41						75	50
Pork													
Backfat	5	93	1	95	0	0	25	20					
Jowl, skinned	24	71	5	43	5	2				45	45		
Trim Reg	34	58	8	36	10	8			40			25	50
Tripe	74	15	10	100	0	0		20					
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	15	4					
Corn flour	29	21	8	0	18	0	15						
Corn syrup	20	0	0	0	5	0				2	2		
Dextrose	.06	0	0	0	10	0				2	2		
Isolated soy protein	8	0	90	0	40	0				2.5			
Non-fat dry milk	3	1	38	0	25	0							14
Rusk	5	9	14	0	16	0	5						
Salt	.01	0	0	0	40	0	2.5	3	2	2.5	2.5	2.5	3.5
Soy protein concentrate	8	0	75	0	45	0					4		
Sugar (sucrose)	.06	0	0	0	10	0			0.5			0.5	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	45	20	25	30	30	20	20
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0							0.05
Onion	89	0	1	0	0	0							1.5
Calculated composition 4% shrink													
Moisture							*56.3	*60.5	*62.2	*56.1	*55.3	61.9	49.6
Fat							20.1	23.2	24.3	28.5	28.2	21.8	27.4
Protein							9.8	11.0	11.4	10.8	9.0	13.1	13.7
Properties													
% Collagen (Max. 35)							23.4	*38.9	29.9	26.0	30.8	29.1	21.7
Bind Points (Min. 1.8)							2.4	2.5	2.6	2.8	2.1	3.1	3.0
Color Points (Min. 2)							3.3	3.8	4.0	3.2	3.2	4.8	3.0

BOLOGNA

Average Values

Section 7 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AQ	AR	AS	AT	AU	AV	AW
Meat block													
Beef													
Trim 80	63	20	17	30	24	39	70	70	55	50	40	36	
Trim 70	55	30	15	39	20	31							55
Pork													
Check meat	67	15	17	72	9	29						32	
Diaphragm	67	17	15	70	16	18			10				10
Heart	73	10	15	27	6	32			10		10		10
Trim 50	36	52	10	34	12	9	30	30		50	50		
Trim Reg	34	58	8	36	10	8			25			32	25
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0	3.5	3.5				5	
Salt	.01	0	0	0	40	0	2.6	2.6	3	3	3	3	3
Soy flour	8	1	47	0	30	0			5				5
Sugar (sucrose)	.06	0	0	0	10	0	1		0.5	0.5		0.5	0.5
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20	20	16	35		10	16
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0							0.75
Onion	89	0	1	0	0	0							1.5
Calculated composition 4% shrink													
Moisture							57.3	57.8	57.4	*59.4	46.9	53.1	54.1
Fat							24.3	24.5	23.6	27.1	*35.4	26.9	27.7
Protein							13.3	13.4	14.0	10.2	13.5	14.1	12.7
Properties													
% Collagen (Max. 35)							28.3	28.3	29.8	31.3	31.1	*41.6	34.9
Bind Points (Min. 1.8)							2.9	2.9	2.9	2.0	2.3	2.4	1.8
Color Points (Min. 2)							4.0	4.1	3.8	2.8	3.6	3.7	2.8

BOLOGNA

Average Values

Section 8 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AX	AY	AZ	BA	BB	BC	BD
Meat block													
Beef													
Trim 70	55	30	15	39	20	31	36						
Trim 50	38	50	11	42	12	19		40					
Pork													
Backfat	5	93	1	95	0	0			29	10	10		
Cheek meat	67	15	17	72	9	29	32						
Heart	73	10	15	27	6	32		10		27	27		
Jowl, skinned	24	71	5	43	5	2						15	
Plate	25	65	9	86	1	2				35	35		
Stomach	71	13	15	62	1	0				28	28		
Trim 80 (lean)	60	23	16	25	16	25			71				50
Trim 50	36	52	10	34	12	9		50					50
Trim Reg	34	58	8	36	10	8	32						
Poultry													
Turkey													
Broth	99	0	1	0	0	1						13	
Meat	68	7	24	18	23	19						72	
Skin	48	39	12	99	6	0						13	
Dry Ingredients													
Cereal flour	12	1	10	0	18	0			9				
Corn syrup	20	0	0	0	5	0				2	2		
Corn syrup solids	3.5	0	0	0	5	0							2
Dextrose	.06	0	0	0	10	0				2	2		1
Isolated soy protein	8	0	90	0	40	0				2.5			
Mustard, heat treated	6	25	31	0	16	5							1.1
Non-fat dry milk	3	1	38	0	25	0	7						4
Rusk	5	9	14	0	16	0			9				
Salt	.01	0	0	0	40	0	3	2.6	2	2.5	2.5	4	2
Semolina flour	12	1	10	0	18	0						15	
Soy protein concentrate	8	0	75	0	45	0					4		
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	20		25	25	15	22
Fruit & Vegetables													
Onion	89	0	1	0	0	0	1.5	1.5					
Calculated composition 4% shrink													
Moisture							50.2	*47.5	35.4	*53.7	53.2	58.5	51.2
Fat							29.2	*39.3	*38.4	29.8	29.5	14.8	29.8
Protein							13.7	9.1	12.0	10.7	11.1	15.0	11.7
Properties													
% Collagen (Max. 35)							*43.3	*36.3	22.5	*47.2	*45.0	23.5	24.9
Bind Points (Min. 1.8)							2.1	*1.0	1.9	*0.9	*1.3	3.1	1.8
Color Points (Min. 2)							3.0	*1.5	2.5	*1.1	*1.0	2.3	*1.9

BOLOGNA

Average Values

Section 9 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r		Pounds for Various Formulations					
Meat block							BE						
Poultry													
Turkey													
Broth	99	0	1	0	0	1	13						
Fat	5	93	1	95	0	0	15						
Meat	68	7	24	18	23	19	72						
Skin	48	39	12	99	6	0	13						
Dry Ingredients													
Salt	.01	0	0	0	40	0	4						
Semolina flour	12	1	10	0	18	0	15						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	15						
Calculated composition 4% shrink													
Moisture							56.5						
Fat							17.2						
Protein							14.6						
Properties													
% Collagen (Max. 35)							23.3						
Bind Points (Min. 1.8)							3.1						
Color Points (Min. 2)							2.3						

BOLOGNA

Average Values

Section 10 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	2	2	2	2	1	1	1	1
Prague Powder	0	0	0					0.87	0.87		
Spices											
Allspice	8.5	8.7	6	1.75	1.5	1		0.5	0.5	1.75	
Caraway	10	15	20					0.1	0.1		2
Cardamon	8	3.5	9		2						
Coriander	5	18	15	2.5	2	2	2.5	1	1	2.5	
Garlic, Powder	6	1	17					0.1			
Ginger	9	4	8.5					0.2	0.2		
Mace	8	30	7		1					1	
Mustard seed, ground	6	24	30								2
Nutmeg	8	33	7				2	2	2		
Pepper black	11	8.5	12					4	4		
Pepper, white	11	8.5	1.3	6	6	6				6	7
Sage	3	14	8.5	2	1	1	1.5			2	

BOLOGNA

Average Values

Section 11 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14	15	16
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	0.9	0.5	0.5	0.5	0.5	0.5	0.3	
Na Ascorbate	0.1	0	0	0.8						1.2	
Na Erythorbate	0.1	0	0								0.87
Ascorbic Acid	0.1	0	0		0.78						
Spices											
Allspice	8.5	8.7	6			1.75	1.5				2
Cardamon	8	3.5	9			2.5	2				
Coriander	5	18	15	2.4	2.4		2	2.5	2	2.5	1
Garlic, Powder	6	1	17	0.75	1.2					0.7	
Ginger	9	4	8.5								1
Mace	8	30	7	2.4	1.2		1		1	0.7	
Mustard seed, ground	6	24	30								1
Nutmeg	8	33	7	1.2	1.2			2		0.7	1
Pepper, white	11	8.5	1.3	5	6	6	6		6	5	7
Sage	3	14	8.5	1.2	1.2	2	1	1.5		1	

BOLOGNA

Average Values

Section 12 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				17	18	19	20	21	22	23	24
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.2
Na Ascorbate	0.1	0	0							0.87	0.87
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Allspice	8.5	8.7	6	1		2				1	
Capsicum O.R.	0	100	0		0.9cc						
Celery seed, ground	6	25	18								2
Cloves	7	22	6	2	0.12		1				
Coriander	5	18	15		0.4	2	2				1
Garlic, Powder	6	1	17	1	0.12	0.25					1
Ginger	9	4	8.5				2				
Liquid smoke	80	0	0							4	
Mace	8	30	7	0.25	0.5						
Nutmeg	8	33	7					2		2	2
Onion powder	5	1	10	1.2	0.12			1		1	
Oregano	7	10	11	0.5							
Paprika	10	13	15	1.5	1.5			4		2	
Pepper black	11	8.5	12				6				
Pepper, white	11	8.5	1.3			8		5		5	4

Average Values

Section 13 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				25							
Spices											
Cayenne	8	17	12	0.6							
Coriander	5	18	15	1.2							
Ginger	9	4	8.5	1.2							
Mace	8	30	7	1.2							
Nutmeg	8	33	7	5							
Pepper, white	11	8.5	1.3	10							

BOLOGNA

Section 14 of 16

Processing Procedures

A.

1. Grind, beef 1/8" plate, pork 3/8" plate
2. Mix
3. Emulsifier
4. Stuff
5. Smoke, 110°F raise to 165°F
6. Cook to internal temperature of 150°F
7. Shower
8. Room temperature, 2 hours
9. Cooler, 45°F

B.

1. Grind, fine plate
2. Mix
3. Emulsifier
4. Stuff
5. Smoke, 120 to 170°F, internal temperature of 155°F
6. Shower
7. Room temperature, 2 hours
8. Cooler

C.

1. Grind, 1/8" plate
2. Mix
3. Emulsifier
4. Stuff
5. Smoke, 125 to 165°F
6. Internal temperature of 150°F
7. Shower
8. Cooler

D.

1. Chop, beef
2. Add seasoning
3. Add 1/3 of the ice
4. Chop
5. Add 1/3 of the ice, binder, salt
6. Chop
7. Chop pork, ascorbate, 1/3 of the ice
8. Chop (do not exceed 56°F)
9. Smoke and cook to internal temperature of 152°F
10. Shower
11. Room temperature
12. Cooler

BOLOGNA

Section 15 of 16

Processing Procedures

- E.
 - 1. Grind, 3/8" plate
 - 2. Chop
 - 3. Add water as needed
 - 4. Stuff
 - 5. Smoke and cook to internal temperature of 148°F
 - 6. Shower
- F.
 - 1. Grind, 1/2" plate
 - 2. Chop, beef, curing mixture and 1/3 of the water
 - 3. Chop, and add salt, 1/3 of the water
 - 4. Chop, and add pork, ascorbate and 1/3 of the water
 - 5. Stuff
 - 6. Cook and smoke to 155°F internal temperature
- G.
 - 1. Chop
 - 2. Mix (10 lbs. cube fat may be added)
 - 3. Stuff
 - 4. Smoke and cook to 155°F internal temperature
 - 5. Chill
- H.
 - 1. Fine grind
 - 2. Mix
 - 3. Stuff
 - 4. Hold at 40°F
 - 5. Room temperature, 1 hour
 - 6. Smoke
 - 7. Cook to 155°F internal temperature
- I.
 - 1. Internal cook temperature of 150°F
 - 2. Slicing temperature of 28°
- J.
 - 1. Fine grind
 - 2. Chop and mix
 - 3. Stuff
 - 4. Smoke, 2 hours at 190°F
 - 5. Water cook, 165°F to internal temperature of 150°F
 - 6. Water cool to internal temperature of 90°F
 - 7. Chill, 36°F

Cooking Forms

Section 16 of 16

- Casings
 - 1. A 7 x 56 artificial casing
 - 2. A 8 x 56 artificial casing
 - 3. A 2-1/2" artificial casing (chub)
 - 4. A 35/38 mm beef rounds
 - 5. Export wide beef round
 - 6. Long beef bungs

BOLOGNA, BEEF

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							A	B	C	D	E	
Meat block												
Beef												
Brisket	65	15	18	40	12	19	30					
Bull F.C.	70	10	20	20	30	47	35	60				
Chuck	66	16	18	30	24	38			70			
Cow F.C.	68	14	18	21	24	39				60		
Flank	43	42	13	24	12	20		40		40	35	
Plate	41	40	18	42	16	25			30			
Trim 80	63	20	17	30	24	39					65	
Veal												
Lean	69	10	19	27	26	30	35					
Dry Ingredients												
Corn syrup solids	3.5	0	0	0	5	0		2		2		
MSG	0	0	0	0	0	0	0.2			0.2		
Salt	.01	0	0	0	40	0	2.75	3	2.5	3	2.6	
Sugar (sucrose)	.06	0	0	0	10	0	0.4		0.5		0.5	
Moist Ingredients												
Water or ice	100	0	0	0	0	0	4	30		30	15	
Fruit & Vegetables												
Onion	89	0	1	0	0	0					0.5	
Calculated composition 4% shrink												
Moisture							65.8	*64.7	55.0	*63.7	58.6	
Fat							11.2	17.6	23.5	19.4	24.3	
Protein							18.5	13.3	18.2	12.3	13.7	
Properties												
% Collagen (Max. 35)							27.7	21.2	33.6	22.0	28.3	
Bind Points (Min. 1.8)							2.7	3.3	3.9	2.5	2.8	
Color Points (Min. 2)							6.1	5.2	6.2	4.0	4.7	

BOLOGNA, BEEF

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.2
Na or K Nitrate	0.1	0	0	2	2	1	1				
Na Erythorbate	0.1	0	0			0.87	0.87			0.87	0.87
Spices											
Allspice	8.5	8.7	6			0.5	0.5	1	1	1	1
Caraway	10	15	20			0.1	0.1				
Celery, dry, ground	6	25	18							2	1
Cloves	7	22	6								3
Coriander	5	18	15			1	1	2	2		
Garlic, Powder	6	1	17	1		0.1				0.5	
Ginger	9	4	8.5	2	2	0.2	0.2				
Mace	8	30	7		2			2			
Nutmeg	8	33	7	2		2	2		2	2	
Onion powder	5	1	10							1	1
Paprika	10	13	15	1						4	
Pepper black	11	8.5	12			4	4				
Pepper, white	11	8.5	1.3	6	6			6	6	5	5

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.2							
Na Erythorbate	0.1	0	0	0.87							
Spices											
Allspice	8.5	8.7	6	1							
Celery seed, ground	6	25	18	1							
Onion powder	5	1	10	1							
Paprika	10	13	15	4							
Pepper, white	11	8.5	1.3	5							

BOLOGNA, BEEF

Section 4 of 5

Processing Procedures

A.

1. Grind
2. Cure meat
3. Hold, 12 hours
4. Chop and mix
5. Stuff
6. Cook to internal temperature of 148°F
7. Cool

B.

1. Grind
2. Mix
3. Stuff
4. Smoke, 3 hours, 180°F
5. Water cook, 165°F to internal temperature of 150°F
6. Water cool to internal temperature of 90°F
7. Chill, 38°F

Cooking Forms

Section 5 of 5

Casings

1. A 7 x 56 artificial casing
2. A 8 x 56 artificial casing
3. A 2 1/2" artificial casing (chub)
4. A 35/38 mm beef round
5. Export wide beef round
6. Long beef bungs

BOLOGNA, COURSE GROUND

Average Values							Section 1 of 4						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Beef													
Trim 90 (lean)	71	11	18	28	27	43	80						
Pork													
Trim Reg	34	58	8	36	10	8	20						
Dry Ingredients													
Salt	.01	0	0	0	40	0	3						
Sugar, sucrose	.06	0	0	0	10	0	0.5						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10						
Calculated composition 4% shrink													
Moisture							63.4						
Fat							18.7						
Protein							14.7						
Properties													
% Collagen (Max. 35)							28.8						
Bind Points (Min. 1.8)							3.7						
Color Points (Min. 2)							5.8						

BOLOGNA, COARSE GROUND

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	0.5							
Spices											
Allspice	8.5	8.7	6	1.5							
Cardamon	8	3.5	9	2							
Coriander	5	18	15	2							
Mace	8	30	7	1							
Pepper, white	11	8.5	1.3	6							
Sage	3	14	8.5	1							

Processing Procedures

Section 3 of 4

A.

1. Grind meat, 1/4" plate
2. Mix
3. Stuff
4. Cook and smoke
5. Cool

Cooking Forms

Section 4 of 4

Casings

1. A 7 x 56 artificial casing
2. A 8 x 56 artificial casing
3. A 2-1/2" artificial casing (chub)
4. A 35/38 mm beef round
5. Export wide beef round
6. Long beef bungs

BOLOGNA, ECONOMY

Average Values							Section 1 of 4						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E		
Beef													
Cheek meat	70	20	18	59	14	48	10						
Cow F.C.	68	14	18	21	24	39	19						
Heart	70	13	17	27	6	40	10	9					
Lip	66	17	17	90	0	1	10	13	13	9			
Trim 90 (lean)	71	11	18	28	27	43	31						
Trim 65	50	35	14	39	18	28		30	30	34	42		
Tripe, fresh	82	10	9	100	0	0	10						
Pork													
Backfat	5	93	1	95	0	0		2		4			
Brains	79	9	10	85	1	0				7			
Heart	73	10	15	27	6	32			9		13		
Jowl, skinned	24	71	5	43	5	2			2				
Snout	45	40	14	80	2	1	10			15	18		
Spleen	76	6	17	90	1	50				8			
Trim 50	36	52	10	34	12	9		18	18				
Tripe	74	15	10	100	0	0		28	28	23	27		
Dry Ingredients													
Cereal flour	12	1	10	0	18	0		23	23	27	27		
Salt	.01	0	0	0	40	0	3	3	3	3	3		
Soy flour	8	1	47	0	30	0	22						
Sugar (sucrose)	.06	0	0	0	10	0	1	1.5	1.5	0.5	0.6		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	55	30	30	40	50		
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.06	0.04					
Calculated composition 4% shrink													
Moisture							67.1	*54.4	*55.7	*58.8	*58.0		
Fat							9.6	19.9	19.1	15.3	17.1		
Protein							15.8	10.0	9.8	10.7	9.5		
Properties													
% Collagen (Max. 35)							27.3	*50.5	*50.5	*63.4	*58.6		
Bind Points (Min. 1.8)							3.4	*1.0	*0.9	*0.9	*0.9		
Color Points (Min. 2)							3.1	*1.3	*1.2	*1.2	*1.2		

BOLOGNA, ECONOMY

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0	0.5	0.5						
Spices											
Allspice	8.5	8.7	6	1.5							
Cardamon	8	3.5	9	2							
Coriander	5	18	15	2							
Mace	8	30	7	1							
Pepper, white	11	8.5	1.3	6							
Sage	3	14	8.5	1							

Processing Procedures

Section 3 of 4

A.

1. Grind
2. Mix
3. Stuff
4. Smoke, 3 hours, 180°F
5. Water cook, 165°F to internal temperature of 150°F
6. Water cool, internal temperature of 90°F
7. Chill, 38°F

B.

1. Grind, fine plate
2. Mix
3. Emulsifier
4. Stuff
5. Smoke, 120 to 170°F, to internal temperature of 155°F
6. Shower
7. Room temperature, 2 hours
8. Cooler

Cooking Forms

Section 4 of 4

- Casings
1. A 7 x 56 artificial casing
 2. A 8 x 56 artificial casing
 3. A 2-1/2" artificial casing (chub)
 4. A 35/38 mm beef round
 5. Export wide beef rounds
 6. Long beef bungs

BOLOGNA, ITALIAN (Mortadella)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Beef												
Plate	41	40	18	42	16	25	20					
Trim 75	58	25	16	38	22	34	50					
Pork												
Backfat	5	93	1	95	0	0	10					
Trim Reg	34	58	8	36	10	8	20					
Dry Ingredients												
Corn syrup solids	3.5	0	0	0	5	0	2					
Salt	.01	0	0	0	40	0	3.25					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	25					
Calculated composition 4% shrink												
Moisture							51.5					
Fat							*33.1					
Protein							10.6					
Properties												
% Collagen (Max. 35)							*39.4					
Bind Points (Min. 1.8)							2.0					
Color Points (Min. 2)							3.1					

BOLOGNA, ITALIAN (Mortadella)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na Erythorbate	0.1	0	0	0.87							
Spices											
Anise seed	10	16	18	0.5							
Mace	8	30	7	2							
Pepper, black, whole	12	9	11	4							
Pepper, white	11	8.5	1.3	4							

Processing Procedures

Section 3 of 4

- A.
1. Chop beef, spices, water, to 40°F
 2. Chop pork, to 55°F
 3. Add pork cubes, whole peppers, mix
 4. Smoke, cook to 155°F internal temperature
 5. Chill to 28°F
 6. Slice

Cooking Forms

Section 4 of 4

Casings

1. A 7 x 56 artificial casing
2. A 8 x 56 artificial casing
3. A 2-1/2" artificial casing
4. A 35/38 beef rounds
5. Export wide beef rounds
6. Long beef bungs

BOLOGNA, LEBANON

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C				
Beef													
Chuck	66	16	18	30	24	38	100	100					
Trim 90 (lean)	71	11	18	28	27	43			100				
Pork													
Lard, melted	0	100	0	0	0	0	10		5				
Dry Ingredients													
Dextrose	.06	0	0	0	10	0		0.75	0.25				
Salt	.01	0	0	0	40	0	3	3.5	3.5				
Sugar (sucrose)	.06	0	0	0	10	0	0.5		0.25				
Calculated composition 10% shrink													
Moisture							53.5	57.6	61.3				
Fat							25.5	16.7	16.3				
Protein							17.6	18.7	18.3				
Properties													
% Collagen (Max. 35)							30.0	30.0	28.0				
Bind Points (Min. 1.8)							4.2	4.5	4.9				
Color Points (Min. 2)							6.7	7.1	7.9				

BOLOGNA, LEBANON

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1	2	3				
Curing Ingredients										
Na or K Nitrite	0.1	0	0	0.25	0.12					
Na or K Nitrate	0.1	0	0	0.5		3				
Spices										
Allspice	8.5	8.7	6			2				
Cinnamon	10	3	4			1				
Cloves	7	22	6			1				
Ginger	9	4	8.5	1.25	1					
Mace	8	30	7	1.25	0.02					
Mustard seed, ground	6	24	30	1	1					
Nutmeg	8	33	7			2				
Pepper black	11	8.5	12		6	5				
Pepper, red	8	17	12			1				
Pepper, white	11	8.5	1.3	6.5						

BOLOGNA, LEBANON

Section 3 of 5

Processing Procedures

A.

1. Cure, 3 days, 38°F
2. Mix, add seasoning and lard
3. Regrind
4. Cold smoke, 24 hours, damper closed
5. Cold smoke, 8 days, damper open

B.

1. Grind
2. Mix
3. Stuff
4. Smoke, 24 hours, damper closed
5. Smoke, 3 days, dampers open

BOLOGNA, LEBANON

Section 4 of 5

Processing Procedures

C.

1. Chop
2. Mix
3. Pan cure, 38°F
4. Remix
5. Stuff
6. Smoke

D.

1. Grind
2. Mix
3. Add starter culture
4. Stuff
5. Smoke, slow, 2 days
6. Cook to internal temperature of 137°F
7. Cool
8. Store, 5 days, 38°F
9. pH 4.5

E.

1. Cut meat and mix 3% salt
2. Age 6 day at 40°F
3. Grind
4. Mix
5. Add starter culture
6. Stuff
7. Slow smoke, 2 days
8. Cook to internal temperature of 137°F
9. Cool
10. Store 5 days, 38°F

Cooking Forms

Section 5 of 5

Casing

1. A 7 x 56 artificial casing
2. A 8 x 56 artificial casing
3. A 35/38 mm beef round
4. Export wide beef rounds
5. Long beef bungs

BOLOGNA, LEONA

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Beef													
Bull F.C.	70	10	20	20	30	47	75						
Chuck	66	16	18	30	24	38		75					
Fat, caul	5	93	1	95	0	0		7					
Pork													
Backfat	5	93	1	95	0	0	7						
Trim Reg	34	58	8	36	10	8	18	18					
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.5	2.5					
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5					
Calculated composition 10% shrink													
Moisture							52.5	49.3					
Fat							26.4	*31.2					
Protein							17.8	16.2					
Properties													
% Collagen (Max. 35)							21.7	30.9					
Bind Points (Min. 1.8)							5.0	3.7					
Color Points (Min. 2)							7.7	5.7					

BOLOGNA, LEONA

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Spices											
Coriander	5	18	15	2	2						
Mace	8	30	7	1							
Nutmeg	8	33	7		1						
Pepper, white	11	8.5	1.3	6	6						

Processing Procedures

Section 3 of 4

A.

1. Grind meat, fine to coarse
2. Mix
3. Stuff
4. Cook and smoke
5. Cool

Cooking Forms

Section 4 of 4

Casings

1. A 7 x 56 artificial casing
2. A 8 x 56 artificial casing
3. A 35/38 mm beef round
4. Export wide beef round
5. Long beef bungs

BRAIN, SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Beef												
Trim 90 (lean)	71	11	18	28	27	43	25					
Calf												
Brain, skinned & washed	79	9	10	85	1	0	50					
Pork												
Trim Reg	34	58	8	36	10	8	25					
Dry Ingredients												
Salt	.01	0	0	0	40	0	1.6					
Fruit & Vegetables												
Onion	89	0	1	0	0	0	6.25					
Calculated composition 7% shrink												
Moisture							*63.6					
Fat							21.7					
Protein							11.5					
Properties												
% Collagen (Max. 35)							*54.0					
Bind Points (Min. 1.8)							*1.5					
Color Points (Min. 2)							2.1					

BRAIN, SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Spices											
Pepper black	11	8.5	12	12.5							

Processing Procedure

Section 3 of 4

- A.
1. Chop, meat fine
 2. Mix
 3. Stuff
 4. Boil, 5 min.
 5. Cool

Cooking Form

Section 4 of 4

1. Fibrous casings

BRATWURST

Average Values

Section 1 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Cow F.C.	68	14	18	21	24	39	40						
Trim 90 (lean)	71	11	18	28	27	43		20	19				
Trim 80	63	20	17	30	24	39				10			
Trim 75	58	25	16	38	22	34					67		
Tripe fresh	82	10	9	100	0	0						20	
Veal													
Lean	69	10	19	27	26	30							50
Pork													
Brains	79	9	10	85	1	0							3
Picnic	59	25	16	23	20	16		80				50	
Trim 80 (lean)	60	23	16	25	16	25			23	90		30	
Trim 50	36	52	10	34	12	9	60		45				
Trim Reg	34	58	8	36	10	8					33		47
Dry Ingredients													
Com syrup solids	3.5	0	0	0	5	0	2						
Dextrose	.06	0	0	0	10	0	1	0.5					
MSG	0	0	0	0	0	0				0.25			
Mustard, heat treated	6	25	31	0	16	5	1.25						
Non-fat dry milk	3	1	38	0	25	0	4	1.5			3.5		3
Salt	.01	0	0	0	40	0	2.75	2.5	2	2	2.5	2.25	2
Soy protein concentrate	8	0	75	0	45	0						3.5	
Sugar (sucrose)	.06	0	0	0	10	0					0.2		
Moist Ingredients													
Egg	74	12	13	0	0	1						4	3
Mayonnaise	15	80	1	0	0	0						8.5	
Water or ice	100	0	0	0	0	0	30	7	13		25		
Fruit & Vegetables													
Onion	89	0	1	0	0	0		1.5			5		
Calculated composition 5% shrink													
Moisture							53.8	59.7	53.0	57.0	*56.2	55.6	48.5
Fat							27.7	20.7	*31.8	23.4	27.7	25.5	*32.1
Protein							11.3	15.8	12.0	16.6	11.4	15.9	14.7
Properties													
% Collagen (Max. 35)							23.5	23.3	29.3	25.6	34.0	27.1	27.7
Bind Points (Min. 1.8)							2.2	3.4	2.1	2.8	2.3	3.2	3.0
Color Points (Min. 2)							2.5	3.3	2.9	4.4	3.0	2.2	3.1

BRATWURST

Average Values

Section 2 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Veal													
Lean	69	10	19	27	26	30	50						
Pork													
Trim 80 (lean)	60	23	16	25	16	25		100	100	100	100	100	100
Trim Reg	34	58	8	36	10	8	47						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0		4					
MSG	0	0	0	0	0	0			0.25				
Non-fat dry milk	3	1	38	0	25	0	3		3.5	3	3		
Salt	.01	0	0	0	40	0	2	2	2	2.25	2	3	2
Soy protein concentrate	8	0	75	0	45	0						8	
Moist Ingredients													
Bread soaked in milk and squeezed	53	3	7	0	10	0		30					
Egg	74	12	13	0	0	1			3				
Water or ice	100	0	0	0	0	0	30		10	30		34	
Fruit & Vegetables													
Onion	89	0	1	0	0	0				1.0			
Calculated composition 5% shrink													
Moisture							*59.0	53.5	58.4	*65.2	55.0	63.4	56.7
Fat							25.7	18.5	20.9	17.7	23.1	16.7	23.7
Protein							11.5	14.0	15.7	13.3	17.2	16.0	16.5
Properties													
% Collagen (Max. 35)							27.2	22.1	23.1	22.8	23.3	18.1	25.0
Bind Points (Min. 1.8)							2.5	2.1	2.6	2.1	2.8	3.8	2.6
Color Points (Min. 2)							2.5	3.1	3.6	3.0	4.0	2.9	4.1

BRATWURST

Average Values

Section 3 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							O						
Pork													
Trim 80 (lean)	60	23	16	25	16	25	65						
Trim 50	36	52	10	34	12	9	35						
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.25						
Sugar (sucrose)	.06	0	0	0	10	0	0.25						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	30						
Calculated composition 5% shrink													
Moisture							*59.6						
Fat							26.3						
Protein							11.0						
Properties													
% Collagen (Max. 35)							27.4						
Bind Points (Min. 1.8)							*1.7						
Color Points (Min. 2)							2.3						

BRATWURST

Average Values

Section 4 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na Erythorbate	0.1	0	0	0.87							
Antioxidant	0	0	0			3	3				
Spices											
Caraway seed, ground	10	15	20					1	1		
Cardamon	8	3.5	9							0.25	
Celery seed	6	25	18					1	1		
Celery seed, ground	6	25	18								0.5
Garlic, Powder	6	1	17	2							
Ginger	9	4	8.5		1						
Lemon Extract	20	5	0					1	1		
Mace	8	30	7		1					1	0.5
Nutmeg	8	33	7	2	1						
Onion powder	5	1	10			8	3	1.75		2	
Paprika	10	13	15	4							
Parsley, dry	9	4	2							1	
Pepper, white	11	8.5	1.3	6	4	5	5	7	7	3.25	6
Sage, rubbed	8	13	11								1

BRATWURST

Average Values

Section 5 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14		
Spices											
Garlic, Powder	6	1	17	0.5							
Ginger	9	4	8.5		3.25						
Mace	8	30	7			2					
Marjoram	4	7	11				3.5				
Nutmeg	8	33	7		1.25		3.5	1			
Nutmeg, oil	0	100	0		.25cc						
Onion powder	5	1	10					0.25			
Pepper black	11	8.5	12		1	2					
Pepper, white	11	8.5	1.3	7	3		3.5	4	7		
Sage, rubbed	8	13	11						0.5		

BRATWURST

Section 6 of 8

Processing Procedures

- A.
 - 1. Grind, 3/16" plate
 - 2. Chop, 20 pounds beef
 - 3. Mix
 - 4. Emulsify
 - 5. Stuff, 30-32 mm pork casings
 - 6. Smoke and cook to internal temperature of 155°F
- B.
 - 1. Grind, 3/8" plate
 - 2. Mix
 - 3. Stuff, 35-38 mm casings
 - 4. May be sold fresh
- C.
 - 1. Grind, 3/8" plate
 - 2. Mix
 - 3. Stuff, 35-38 mm casing
 - 4. Steam cook, 160°F to internal temperature of 152°F
 - 5. Shower to 110°F
 - 6. Chill, 38-40°F
- D.
 - 1. Grind, 3/8" plate
 - 2. Mix
 - 3. Stuff, 35-38 mm casings
 - 4. Smoke and cook to internal temperature of 152°F
 - 5. Shower to 110°F
 - 6. Chill, 38°F
- E.
 - 1. Grind, 1/8" plate
 - 2. Mix
 - 3. Stuff
 - 4. Cook in water to internal temperature of 148°F
- F.
 - 1. Chop
 - 2. Mix
 - 3. Hold, 18 hrs at 36°F
 - 4. Dry
 - 5. Slow smoke, 120°F for 4 hours
- G.
 - 1. Grind, 3/16" plate
 - 2. Chop
 - 3. Stuff, 21-23 mm collagen casings
 - 4. Cook and charcoal grill
 - 5. Place in "boil in bag" pouch

BRATWURST

Section 7 of 8

Processing Procedures

H.

1. Blend
2. Hold, 24 hours
3. Chop to 55°F
4. Stuff in 30 mm casings
5. Water or steam cook, 170°F to internal temperature of 155°F

I.

1. Grind, 1/4" plate
2. Preblend, 24 hrs
3. Chop to 45°F
4. Stuff into 30 mm casings
5. Steam, water cook at 170°F to internal temperature of 155°F

J.

1. Grind
2. Mix
3. Grind
4. Stuff
5. Smoke, 3-4 hours at 125°F
6. Cook
7. Chill

K.

1. Grind
2. Mix
3. Stuff
4. Water cook, 170°F, 10 min
5. Dry, 34°F
6. Very perishable

Cooking Forms

Section 8 of 8

Casings

1. A 30-32 mm hog casing
2. A 35-38 mm hog casing
3. A 4" link hog casing
4. A 21-23 mm collagen casing

BRAUNSCHWEIGER

Average Values

Section 1 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	5						
Liver	72	7	20	95	2	50		20					
Trim 90 (lean)	71	11	18	28	27	43			10				
Tripe, fresh	82	10	9	100	0	0				31			
Veal													
Cured	67	9	18	25	25	27					12		
Lean	69	10	19	27	26	30		25				20	15
Pork													
Backfat	5	93	1	95	0	0		2.5					
Bacon ends	19	68	12	86	1	3		10					
Brains	79	9	10	85	1	0					5		
Cheek meat	67	15	17	72	9	29		30					
Ham skin, cured	42	31	27	99	3	1							8
Jowl, skinned	24	71	5	43	5	2			40			20	25
Liver	73	7	19	24	2	49	50	25	50	31	42	40	40
Skin	40	32	28	99	6	1				7			
Trim 50	36	52	10	34	12	9	45						
Trim Reg	34	58	8	36	10	8					41		12
Trim 15 (fat)	11	85	3	60	3	1				31			
Dry Ingredients													
Dextrose	.06	0	0	0	10	0					0.4		
Non-fat dry milk	3	1	38	0	25	0	3	3.5			3.5		
Salt	.01	0	0	0	40	0	2	2.5	2.5	2.5	2	2	3
Sugar (sucrose)	.06	0	0	0	10	0		0.4					
Moist Ingredients													
Egg	74	12	13	0	0	1					4		
Fruit & Vegetables													
Onion	89	0	1	0	0	0		3					
Calculated composition 3% shrink													
Moisture							52.2	60.2	50.4	51.5	52.9	57.0	49.9
Fat							26.9	16.3	*33.2	*34.1	27.0	23.9	*31.5
Protein							15.8	17.9	13.4	11.6	14.8	15.6	14.8
Properties													
% Collagen (Max. 35)							24.9	*51.7	27.4	*57.9	25.7	26.4	*37.9
Bind Points (Min. 1.8)							*1.3	1.9	*0.8	*0.3	*1.3	*1.5	*1.1
Color Points (Min. 2)							5.4	6.1	5.5	2.9	4.5	6.1	4.7

BRAUNSCHWEIGER

Average Values

Section 2 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Veal													
Lean	69	10	19	27	26	30	15	14	12	10			
Pork													
Backfat	5	93	1	95	0	0					40		
Bacon ends	19	68	12	86	1	3					8	55	16
Jowl, skinned	24	71	5	43	5	2		43	25	40			
Liver	73	7	19	24	2	49	50	43	50	50	44	45	34
Trim 80 (lean)	60	23	16	25	16	25			13				
Trim 50	36	52	10	34	12	9							50
Trim Reg	34	58	8	36	10	8	35						
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0					3.5	4	
Salt	.01	0	0	0	40	0	2	2.5	2	2.5	2.5	2.5	3.5
Sugar (sucrose)	.06	0	0	0	10	0							0.5
Moist Ingredients													
Precooked wheat	87	0	2	0	20	0	4						
Water or ice	100	0	0	0	0	0						4	12
Fruit & Vegetables													
Onion	89	0	1	0	0	0			5	0.75			1.5
Calculated composition 3% shrink													
Moisture							57.4	48.6	57.6	50.5	34.5	41.1	48.8
Fat							24.6	*35.1	24.5	*32.8	*48.1	*37.9	*34.4
Protein							14.8	13.1	14.6	13.4	11.6	15.6	11.8
Properties													
% Collagen (Max. 35)							27.2	27.7	26.1	27.2	29.1	*46.4	*36.6
Bind Points (Min. 1.8)							*1.2	*1.0	*1.1	*0.8	*0.5	*0.6	*0.7
Color Points (Min. 2)							5.6	4.9	5.7	5.3	4.3	4.1	3.2

BRAUNSCHWEIGER

Average Values

Section 3 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	Q	R	S	T	U
Meat block													
Pork													
Bacon ends	19	68	12	86	1	3	15	10	10	10	5	5	
Jowl, skinned	24	71	5	43	5	2		40			35	35	50
Liver	73	7	19	24	2	49	31	50	45	45	50	50	50
Trim 80 (lean)	60	23	16	25	16	25			25	25	10	10	
Trim 50	36	52	10	34	12	9	54						
Trim Reg	34	58	8	36	10	8			20	20			
Dry Ingredients													
Dextrose	.06	0	0	0	10	0		0.5					1
MSG	0	0	0	0	0	0	0.2						
Mustard, heat treated	6	25	31	0	16	5		0.1					1
Non-fat dry milk	3	1	38	0	25	0		3.5	3		3		4
Salt	.01	0	0	0	40	0	3.25	2.7	2.5	2.5	2	2	2.75
Sugar (sucrose)	.06	0	0	0	10	0	0.5		2	2			
Moist Ingredients													
Water or ice	100	0	0	0	0	0					3		
Fruit & Vegetables													
Onion	89	0	1	0	0	0			4				2
Calculated composition 3% shrink													
Moisture							41.5	43.3	52.6	52.7	49.4	49.3	43.9
Fat							*40.1	*37.4	25.3	26.9	*32.5	*34.4	*36.6
Protein							13.0	13.6	15.3	15.1	13.9	13.6	12.9
Properties													
% Collagen (Max. 35)							*36.6	29.6	28.2	30.4	27.1	29.4	24.2
Bind Points (Min. 1.8)							*0.8	*0.6	*1.2	*1.0	*0.8	*0.5	*0.7
Color Points (Min. 2)							3.4	4.6	4.9	5.3	4.9	5.2	4.4

BRAUNSCHWEIGER

Average Values

Section 4 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							V	W	X	Y	Z	AA	AB
Meat block													
Pork													
Jowl, skinned	24	71	5	43	5	2	50	50	50	50	50	45	45
Liver	73	7	19	24	2	49	50	50	50	50	50	55	55
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	1	1	0.25	0.25		0.25	0.25
Non-fat dry milk	3	1	38	0	25	0	3.5	2	3.5			3.5	
Salt	.01	0	0	0	40	0	2.2	2.5	3	3	2.5	3	3
Soy protein concentrate	8	0	75	0	45	0				3.5			3.5
Moist Ingredients													
Water or ice	100	0	0	0	0	0	5	0.6					
Fruit & Vegetables													
Onion	89	0	1	0	0	0					2.5		
Calculated composition 3% shrink													
Moisture							46.4	44.7	43.8	44.0	46.7	46.2	46.4
Fat							*36.0	*37.9	*37.7	*37.7	*38.3	*34.6	*34.6
Protein							12.3	12.4	12.9	14.1	11.8	13.5	14.8
Properties													
% Collagen (Max. 35)							25.2	26.3	25.1	23.0	27.9	24.9	22.7
Bind Points (Min. 1.8)							*0.6	*0.5	*0.6	*1.4	*0.3	*0.6	*1.5
Color Points (Min. 2)							4.3	4.6	4.5	4.5	4.6	5.0	5.0

BRAUNSCHWEIGER

Average Values

Section 5 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							AC	AD	AE	AF	AG	AH	AI
Pork													
Jowl, skinned	24	71	5	43	5	2	45	40	40	40	20		
Liver	73	7	19	24	2	49	55	60	60	40	40	50	50
Trim 80 (lean)	60	23	16	25	16	25				20	40	17	
Trim 50	36	52	10	34	12	9						33	
Trim Reg	34	58	8	36	10	8							50
Dry Ingredients													
Dextrose	.06	0	0	0	10	0					1		
Non-fat dry milk	3	1	38	0	25	0					3.5		
Salt	.01	0	0	0	40	0	2.5	2.5	2.5	1.6	2.5	2.5	2.5
Sugar (sucrose)	.06	0	0	0	10	0		0.4	0.4				
Moist Ingredients													
Water or ice	100	0	0	0	0	0		3.5			3		10
Fruit & Vegetables													
Onion	89	0	1	0	0	0		3					
Calculated composition 3% shrink													
Moisture							48.2	53.0	50.4	48.5	54.2	55.8	55.1
Fat							*36.0	*30.7	*32.7	*36.3	24.6	24.7	29.8
Protein							12.8	12.7	13.4	13.0	15.3	15.6	12.4
Properties													
% Collagen (Max. 35)							27.3	26.7	26.9	27.2	23.6	26.3	27.5
Bind Points (Min. 1.8)							*0.3	*0.3	*0.3	*0.8	*1.5	*1.0	*0.5
Color Points (Min. 2)							5.2	5.3	5.6	4.6	5.0	5.7	4.6

BRAUNSCHWEIGER

Average Values

Section 6 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							AJ						
Pork													
Liver	73	7	19	24	2	49	34						
Meat, smoked	62	22	15	25	10	22	16						
Trim 50	36	52	10	34	12	9	50						
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.5						
Sugar (sucrose)	.06	0	0	0	10	0	1						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10						
Fruit & Vegetables													
Onion	89	0	1	0	0	0	0.25						
Calculated composition 3% shrink													
Moisture							54.0						
Fat							28.9						
Protein							12.6						
Properties													
% Collagen (Max. 35)							27.7						
Bind Points (Min. 1.8)							*0.9						
Color Points (Min. 2)							3.8						

BRAUNSCHWEIGER

Average Values

Section 7 of 13

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	2	2	2					
Na Ascorbate	0.1	0	0				0.64				
Na Erythorbate	0.1	0	0					0.87	0.87		
Spices											
Allspice	8.5	8.7	6				2	1		0.5	
Cardamon	8	3.5	9	1	1			0.5			
Cloves	7	22	6								0.5
Cloves soluble	0	0	0						1		0.5
Coriander	5	18	15							0.5	
Ginger	9	4	8.5					1.5	2	0.5	0.5
Mace	8	30	7	1	1						
Marjoram	4	7	11	1	1	1		2	2	0.5	0.5
Mustard, prepared	80	4	5							1.5	
Nutmeg	8	33	7				2		1	0.5	0.5
Onion powder	5	1	10	2.5			3	2	3		5
Pepper black	11	8.5	12	4	4				1		
Pepper, white	11	8.5	1.3				2	3.5	8	4	4
Sage	3	14	8.5			1				0.5	0.5

BRAUNSCHWEIGER

Average Values

Section 8 of 13

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14	15	16
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.2	0.2	0.2	0.12			
Na or K Nitrate	0.1	0	0		0.3						
Na Erythorbate	0.1	0	0		0.87	0.87	0.87				
Spices											
Allspice	8.5	8.7	6		2	1			2	1	
Bay leaves ground	5	8	8				0.12				
Cardamon	8	3.5	9					1			1
Celery seed, ground	6	25	18								2
Cloves soluble	7	22	6							2	
Coriander	5	18	15				0.5				
Ginger	9	4	8.5	2							
Mace	8	30	7				0.75	1			
Marjoram	4	7	11	2		2	1	1		1	1
Mustard seed, ground	6	24	30			4					
Nutmeg	8	33	7	1	2				2		
Onion powder	5	1	10		3	12	4	2.5	3	4	
Pepper black	11	8.5	12	1			1	4			
Pepper, white	11	8.5	1.3	8	2	4			2	6	6

BRAUNSCHWEIGER

Average Values

Section 9 of 13

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				17	18	19				
Spices										
Cardamon	8	3.5	9	1	0.75	0.75				
Celery seed, ground	6	25	18		1					
Cinnamon	10	3	4		0.75	0.75				
Coriander	5	18	15		2.5	2.5				
Mace	8	30	7		1.5	1.5				
Marjoram	4	7	11	2						
Onion powder	5	1	10			1.75				
Pepper, white	11	8.5	1.3	2	6.5	6.5				
Sage	3	14	8.5	2						
Vinegar 90gr.	94	0	0	6.5						

BRAUNSCHWEIGER

Section 10 of 13

Processing Procedures

A.

1. Grind, 3/8" plate
2. Mix
3. Emulsify
4. Stuff
5. Cook in 160°F water to internal temperature of 150°F
6. Chill in ice water to 100°F
7. Rinse, hot water
8. Room temperature, 1 hr
9. Chill

B.

1. Grind, 3/16" plate
2. Grind liver, 1/8" plate
3. Mix
4. Emulsify
5. Stuff
6. Cook, 165°F water to 150°F internal temperature
7. Chill, 20 minutes, cold water
8. Shower, 180°F, 30 sec
9. Cooler

Processing Procedures

C.

1. Cook meat and save broth
2. Grind, 1/8" plate
3. Grind, cooked jowl 3/4" plate
4. Mix
5. Emulsify
6. Stuff
7. Water cook 165°F to 148°F internal temperature
8. Shower
9. Cooler

D.

1. Slash livers
2. Bleach, 30 minutes in ice water
3. Drain
4. Chop, until bubbles appear
5. Add pork, chop, to 60°F
6. Stuff, non-porous casing
7. Cook, 160°F water to internal temperature of 150°F
8. Chill in ice water to 100°F

E.

1. Chop liver until it bubbles
2. Add pork and spices
3. Chop to 50°F
4. Add milk
5. Chop to 60°F
6. Stuff
7. Cook in steam, 180°F, to internal temperature of 150°F
8. Chill, ice water, 40°F

F.

1. Presoak liver in salt brine
2. Rinse
3. Chop
4. Add pork
5. Chop
6. Stuff
7. Water cook, 170°F, of internal temperature of 155°F
8. Chill, ice water

Processing Procedures

G.

1. Grind, 3/16" plate
2. Mix
3. Regrind, 1/8" plate
4. Stuff
5. Cook in 160°F water to internal temperature of 152°F
6. Chill, ice water
7. Spary, 180°F water
8. Dry
9. Heavy smoke, 115°F
10. Cool, 35°F

H.

1. Chop
2. Stuff, artificial casing
3. Water cook, 160°F to internal temperature of 145°F
4. Water cool to 80°F
5. Chill, 36°F

I.

1. Chop
2. Stuff natural casing
3. Water cook, 170°F, internal temperature of 150°F
4. Water cool, to 80°F
5. Chill, 36°F

Cooking Forms

Section 13 of 13

1. Fibrous casing
2. Beef Middles
3. Hog bung
4. Non-Porous artificial casing

BRAWN (Pork Side With Bones Removed)

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							A					
Meat block												
Pork												
Side deboned	33	57	9	36	10	8	use					
Calculated composition	12% shrink											
Moisture							23.9					
Fat							64.8					
Protein							10.2					

Processing Procedures

Section 2 of 3

A.

1. Pickle

1 gallon water
1.5 pound salt
0.2 pounds wheat bran

2. Boil and strain

B.

1. Dry cure with salt
2. Resalt
3. Roll and tie
4. Boil until tender
5. Cool
6. Place cool meat in pickle

Cooking Form

Section 3 of 3

1. Roll and tied

BROWN'N SERVE BREAKFAST SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Beef												
Trim 85	66	15	18	28	26	41	10					
Pork												
Trim 80 (lean)	60	23	16	25	16	25	35					
Trim 50	36	52	10	34	12	9	55					
Dry Ingredients												
Corn syrup solids	3.5	0	0	0	5	0	2					
Dextrose	.06	0	0	0	10	0	1					
MSG	0	0	0	0	0	0	0.125					
Salt	.01	0	0	0	40	0	2.25					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	20					
Calculated composition 20% shrink												
Moisture							42.3					
Fat							38.0					
Protein							12.9					
Properties												
% Collagen (Max. 35)							24.3					
Bind Points (Min. 1.8)							2.0					
Color Points (Min. 2)							2.6					

BROWN'N SERVE BREAKFAST SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na Erythorbate	0.1	0	0	0.87							
Spices											
Cardamon	8	3.5	9	1							
Ginger	9	4	8.5	2							
Liquid smoke	80	0	0	1							
Paprika	10	13	15	2							
Pepper, white	11	8.5	1.3	6							
Sage	3	14	8.5	2							

Processing Procedure

Section 3 of 4

A.

1. Grind beef
2. Chop beef and ingredients
3. Add pork and chop
4. Stuff into 23/32 mm artificial casings
5. Cook to internal temperature of 160°F
6. Steam 3 minutes at 160°F
7. Chill, cold water, 10 min
8. Dry
9. Refrigerate to 32°F internal temperature
10. Peel

Cooking Form

Section 4 of 4

1. A 23/32 mm artificial casing

BUTT, BONELESS, SMOKED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Pork												
Butt	57	29	13	27	16	15	100					
Dry Ingredients												
Dextrose	.06	0	0	0	10	0	1.5					
Salt	.01	0	0	0	40	0	5.5					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	42.5					
Calculated composition 10% shrink												
% Pump							10					
Moisture							55.1					
Fat							29.3					
Protein							13.1					

BUTT, BONELESS, SMOKED

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per brine solution							
Curing Ingredients				1							
Na or K Nitrite	0.1	0	0	0.5							

Processing Procedure

Section 3 of 4

A.

1. Chill meat, 38°F
2. Stitch pump, 10%
3. Place in brine, 3-6 days, 38°F
4. Wash, drain
5. Stockinette
6. Cook and smoke to internal temperature of 152°F
7. Cool at room temperature to 110°F internal temperature
8. 18 hours at 45°F

Cooking Form

Section 4 of 4

1. Stockinette

CALVASSER SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r		Pounds for Various Formulations					
Meat block							A						
Pork													
Cheek meat, cured	67	15	17	72	7	25	30						
Trim, reg. cured	34	58	8	36	8	6	30						
Trim 15 (fat) cured	11	85	3	60	1	1	40						
Dry Ingredients													
Salt	.01	0	0	0	40	0	1						
Sugar (sucrose)	.06	0	0	0	10	0	0.5						
Fruit & Vegetables													
Pimiento	92	1	1	0	0	60	2						
Calculated composition 5% shrink													
Moisture							31.9						
Fat							*56.9						
Protein							8.9						
Properties													
% Collagen (Max. 35)							10.2						
Bind Points (Min. 1.8)							*0.9						
Color Points (Min. 2)							2.8						

CALVASSER SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Spices											
Celery seeds	6	25	18	1							
Chili powder	8	12	14	1							
Coriander	5	18	15	3							
Ginger	9	4	8.5	2							
Nutmeg	8	33	7	2							
Paprika	10	13	15	8							

Processing Procedure

Section 3 of 4

A.

- 1. Chop
- 2. Stuff
- 3. Medium smoke, 2-1/2 hrs
- 4. Cook, 30 minutes at 155°F

Cooking Form

Section 4 of 4

- 1. Cellulose casing

CANADIAN BACON

Average Values							Section 1 of 4						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Pork													
Loin, meat	57	25	17	23	16	25	use						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	use						
Gelatin	13	0	85	0	20	0	use						
Salt	.01	0	0	0	40	0	use						

CANADIAN BACON

Average Values				Section 2 of 4									
	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat									
				1									
Curing Ingredients													
Na or K Nitrite	0.1	0	0	use									

CANADIAN BACON

Section 3 of 4

Processing Procedures

A.

1. Brine

5 gallon 38°F water
4-1/2 pounds salt
1-1/2 pounds sugar
1/2 ounces nitrite

B.

1. Bone and trim
2. Chill, 38°F
3. Pump, 10%
4. Place in brine for 5 days at 38°F
5. Shower
6. Rub gelatin on lean if small loins are used
7. Stuff
8. Smoke and cook to internal temperature of 142°F

C.

1. Bone and trim
2. Dry cure
3. Long smoke
4. Cook to internal temperature of 150°F

Cooking Form

Section 4 of 4

1. Artificial casing
2. Bacon comb

CAPICOLA

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Pork													
Butt 3-4 lbs, boneless	57	29	13	27	16	15	100						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	use						
Salt	.01	0	0	0	40	0	use						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	use						
Calculated composition 30% shrink													
% Pump							10						
Moisture							42.3						
Fat							*37.7						
Protein							16.9						

Processing Procedures

Section 2 of 4

A.

1. Brine

5 gallon 38°F, water
5.5 pounds salt
1.5 pounds dextrose
0.5 ounces nitrite

B.

1. Chill meat, 38°F
2. Stitch pump, 10%
3. Place in same brine, 3 day, 38°F
4. Spray wash
5. Rub with paprika and red pepper
6. Stuff
7. Dry
8. Smoke and cook to internal temperature of 152°F
9. Dip in boiling water
10. Room temperature, to 110°F internal temperature
11. Chill, 18 hrs, 45°F

CAPICOLA

Section 3 of 4

Processing Procedures

C.

1. Dry cure

4.5 pounds salt
.75 to 1.5 pounds sugar
1 to 4 ounces nitrate
0 to .25 ounces nitrite
0 to 2 ounces fennel seed
0 to 1.1 pounds cayenne pepper

D.

1. Chill to 34°F
2. Cover with dry cure and place in a container, 36°F
3. Cure, 10 days, rework, new dry cure
4. Cure 25 days, wash
5. Rub with paprika and red pepper
6. Stuff
7. Dry, smoke, 90°F, 30 hours
8. Hot water dip
9. Dry, 20 days, 70°F, 70%RH

E.

1. Rub

2 gallon of 100° pickle
4.5 pounds salt
.4 pounds sucrose
.4 pounds dextrose
4 ounces nitrate
1.5 pound pimientos
1.5 pounds ground pepper pods

Cooking Forms

Section 4 of 4

1. Beef bungs
2. Synthetic casing

CERVELAT

Average Values

Section 1 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Cheek meat	70	20	18	59	14	48	33	20	10				
Chuck	66	16	18	30	24	38				27			
Heart	70	13	17	27	6	40		20	20		35		
Lip	66	17	17	90	0	1			10				
Trim 90 (lean)	71	11	18	28	27	43		35				80	75
Trim 70	55	30	15	39	20	31			50		22		
Pork													
Backfat	5	93	1	95	0	0						20	
Cheek meat	67	15	17	72	9	29	33						
Shoulder	58	27	14	25	18	15				13			
Trim 80 (lean)	60	23	16	25	16	25	17			60			
Trim Reg	34	58	8	36	10	8		25			28		25
Trim 15 (fat)	11	85	3	60	3	1	17		10		15		
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.2	0.5	0.3	0.25	0.7	0.5	0.5
Salt	.01	0	0	0	40	0	3	3.25	2.5	3.4	3	3.25	3.25
Sugar (sucrose)	.06	0	0	0	10	0	0.2		0.3	0.25	0.7		
Moist Ingredients													
Water or ice	100	0	0	0	0	0							
Calculated composition 9% shrink													
Moisture							51.0	55.1	50.0	55.0	40.4	51.3	55.5
Fat							*31.8	26.4	*31.8	22.9	*42.3	29.0	24.1
Protein							15.7	16.2	15.7	17.2	12.6	15.5	16.4
Properties													
% Collagen (Max. 35)							*57.7	*36.1	*45.0	26.5	33.2	28.9	29.0
Bind Points (Min. 1.8)							1.9	2.8	2.1	3.2	*1.3	4.1	4.1
Color Points (Min. 2)							5.5	6.3	4.9	4.8	3.8	6.6	6.3

CERVELAT

Average Values

Section 2 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	75	60	36				
Trim 80	63	20	17	30	24	39				33			
Trim 75	58	25	16	38	22	34					50	50	
Trim 70	55	30	15	39	20	31							100
Pork													
Backfat	5	93	1	95	0	0		40	34				
Cheek meat	67	15	17	72	9	29				33			
Heart	73	10	15	27	6	32					20	20	
Trim 80 (lean)	60	23	16	25	16	25			30	17			
Trim 50	36	52	10	34	12	9					30		
Trim Reg	34	58	8	36	10	8						30	
Trim 15 (fat)	11	85	3	60	3	1	25			17			
Dry Ingredients													
Dextrose	.06	0	0	0	10	0		1		0.2		0.25	0.75
Salt	.01	0	0	0	40	0	2.4	3	2.8	3	3.5	3.5	3
Sugar, brown	2	0	0	0	0	0			0.8				
Sugar (sucrose)	.06	0	0	0	10	0				0.2	0.5	0.25	
Moist Ingredients													
Cognac	62	0	0	0	0	0			0.2				
Starter culture											use	use	
Water or ice	100	0	0	0	0	0		25					
Calculated composition 9% shrink													
Moisture							50.2	*49.4	38.2	48.5	47.6	47.0	48.4
Fat							*31.7	*37.3	*45.0	*31.8	*31.8	*33.7	*31.8
Protein							15.3	9.5	12.3	15.4	14.8	14.2	15.9
Properties													
% Collagen (Max. 35)							29.7	30.5	28.7	*46.3	34.8	*35.1	39.0
Bind Points (Min. 1.8)							3.9	2.5	2.7	2.4	2.4	2.3	3.2
Color Points (Min. 2)							6.2	4.0	4.2	4.8	4.2	4.1	4.9

CERVELAT

Average Values

Section 3 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							O					
Pork												
Backfat	5	93	1	95	0	0	28					
Trim 80 (lean)	60	23	16	25	16	25	72					
Dry Ingredients												
Dextrose	.06	0	0	0	10	0	1					
Salt	.01	0	0	0	40	0	3					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	25					
Calculated composition 9% shrink												
Moisture							49.4					
Fat							*36.3					
Protein							10.1					
Properties												
% Collagen (Max. 35)							26.5					
Bind Points (Min. 1.8)							*1.6					
Color Points (Min. 2)							2.5					

CERVELAT

Average Values

Section 4 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.2	0.12			
Na or K Nitrate	0.1	0	0					0.12	3	3	3
Na Erythorbate	0.1	0	0					0.87			
Spices											
Cardamon	8	3.5	9					0.7	1		
Coriander	5	18	15	6	1	1		2	2		
Garlic, Powder	6	1	17	0.5	0.75					0.75	
Ginger	9	4	8.5					2			
Mustard, prepared	80	4	5	4							
Mustard seed, ground	6	24	30		1	1					1
Nutmeg	8	33	7						1		
Paprika	10	13	15					4			
Pepper black	11	8.5	12	5.5	4	4					6
Pepper, red	8	17	12							3	
Pepper, white	11	8.5	1.3				5	4	7	6	3

Average Values

Section 5 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11					
Curing Ingredients											
Na or K Nitrate	0.1	0	0	3	3	2					
Spices											
Cardamon	8	3.5	9			1					
Coriander	5	18	15			2.8					
Nutmeg	8	33	7			1					
Pepper, white	11	8.5	1.3	6	6	7.5					
Pepper, white, whole	11	8	10	1.5							

Processing Procedures

Section 6 of 8

A.

1. Grind
2. Mix
3. Cure, in tubs, 2 days, 38°F
4. Regrind
5. Stuff in 3" casings
6. Dry, room temperature, 4 hrs
7. Smoke and cook to internal temperature of 145°F
8. Shower to 120°F internal temperature
9. Room temperature, 2 hours
10. Cooler

B.

1. Grind
2. Mix
3. Cure, 38°F
4. Mix
5. Stuff
6. Dry, 48°F, 24 hours
7. Cold smoke, 24 hours
8. Cook to 140°F internal temperature
9. Dip in 200°F brine
10. Smoke
11. Dry, cooler, 55°F

C.

1. Grind
2. Mix
3. Cure, 38°F
4. Remix
5. Hold, 24 hours, 38°F
6. Room temperature, 2 hours
7. Cold (80°F) smoke, 36 hours
8. Store, 6 hours, 100°F
9. Cooler, 24 hrs.

D.

1. Grind
2. Mix, starter culture
3. Cure, 2 days, 38°F
4. Mix
5. Stuff
6. Hold, 2 days, 50°F
7. Cold smoke, 3 days
8. Cook in 155°F water, 45 minutes

CERVELAT

Section 7 of 8

Processing Procedures

E.

1. Grind
2. Mix
3. Cure, 38°F
4. Remix
5. Stuff
6. Green room, 38°F, 24 hours
7. Cold smoke and dry, 3 days
8. Dry room, cool slowly
9. 20 days 45+°F

F.

1. Cube and freeze backfat
2. Chill meat, 32°F
3. Grind 3/16"
4. Mix with starter culture
5. Regrind, 3/16"
6. Stuff
7. Cure, 80°F, 90% RH, 18 hours
8. Smokehouse, 100°F, 12 hours
9. Smoke, 12 hours
10. Cook, internal temperature of 137°F
11. Hot shower
12. Chill, 45°F

G.

1. Mix with lactic acid starter culture
2. Grind, 1/8"
3. Stuff
4. Ferment, 80°F, 90% RH, to pH 4.7
5. Smoke, 80°F
6. Dry, 65°F

Cooking Form

Section 8 of 8

1. No. 6 fibrous casing
2. Use 55-60 mm beef middles

CHEESE FILLER

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Dry Ingredients													
Cheese, longhorn	37	32	25	0	0	1	100						
Gelatin	13	0	85	0	20	0	6						
Non-fat dry milk	3	1	38	0	25	0	4.5						
Salt	.01	0	0	0	40	0	2						
Sugar (sucrose)	.06	0	0	0	10	0	6						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	56						
Worcestershire sauce	62	1	6	0	0	90	0.25						
Fruit & Vegetables													
Pickle, sweet	61	1	1	0	0	0	6						
Pimiento	92	1	1	0	0	60	3						
Calculated composition 1% shrink													
Moisture							54.2						
Fat							17.7						
Protein							17.5						

CHEESE FILLER

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of cheese							
				1							
Spices											
Mace	8	30	7	0.6							
Pepper, red	8	17	12	0.6							
Vinegar	94	0	0	96							

Processing Procedure

Section 3 of 4

A.

1. Mix, gelatin and cold water
2. Chop
3. Mix, pickles and pimentos
4. Melt cheese and pour into mixture

Cooking Form

Section 4 of 4

1. Chopper and mixer

CHEESEFURTER

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	50						
Trim 70	55	30	15	39	20	31	25						
Trim 65	50	35	14	39	18	28		35					
Veal													
Lean	69	10	19	27	26	30		25					
Pork													
Trim 50	36	52	10	34	12	9	25						
Trim Reg	34	58	8	36	10	8		25					
Dry Ingredients													
Caseinate	10	0	90	0	40	0	3						
Cheese, cheddar, cubes	37	32	25	0	0	1	25	15					
Dextrose	.06	0	0	0	10	0	1	1					
Mustard, heat treated	6	25	31	0	16	5	1						
Non-fat dry milk	3	1	38	0	25	0	10	5					
Salt	.01	0	0	0	40	0	2.75	2.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	50						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.125					
Onion	89	0	1	0	0	0		3					
Calculated composition 6% shrink													
Moisture							58.8	42.9					
Fat							19.0	*32.5					
Protein							15.6	16.5					
Properties													
% Collagen (Max. 35)							17.1	22.6					
Bind Points (Min. 1.8)							3.1	2.2					
Color Points (Min. 2)							2.9	2.9					

CHEESEFURTER

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na Erythorbate	0.1	0	0	0.87							
Spices											
Cardamon	8	3.5	9	0.5							
Coriander	5	18	15	3							
Mustard seed, ground	6	24	30		3						
Nutmeg	8	33	7	2							
Paprika	10	13	15	4							
Pepper, white	11	8.5	1.3	5	6						

Processing Procedure

Section 3 of 4

A.

1. Chop, beef and ice, 44°F
2. Chop all to 60°F
3. Stuff
4. Cook to internal temperature of 155°F
5. Chill to 34°F

B.

1. Grind 1/8"
2. Cube cheese, 1"
3. Chop meat and seasoning
4. Mix
5. Cook like franks

Cooking Form

Section 4 of 4

1. A 29-32 mm cellulose casing

CHEESE LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Beef													
Trim 65	50	35	14	39	18	28	40						
Veal													
Lean	69	10	19	27	26	30	40	25					
Pork													
Trim 80 (lean)	60	23	16	25	16	25		62					
Trim Reg	34	58	8	36	10	8	20	13					
Dry Ingredients													
Cheese, cheddar	37	32	25	0	0	1	10	25					
Dextrose	.06	0	0	0	10	0		0.4					
Non-fat dry milk	3	1	38	0	25	0	12						
Salt	.01	0	0	0	40	0	2	1.75					
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.4					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10						
Calculated composition 3% shrink													
Moisture							49.4	52.0					
Fat							25.2	26.1					
Protein							16.8	17.7					
Properties													
% Collagen (Max. 35)							22.0	18.9					
Bind Points (Min. 1.8)							3.3	2.4					
Color Points (Min. 2)							3.1	3.3					

CHEESE LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Spices											
Coriander	5	18	15	1							
Nutmeg	8	33	7	2							
Pepper, white	11	8.5	1.3	7							

Processing Procedure

Section 3 of 4

A.

1. Grind
2. Mix
3. Line pan with fat and fill
4. Cook at 160°F, 2.5 hrs.

Cooking Form

Section 4 of 4

1. Pans

CHICKEN JELLIED LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Poultry													
Chicken													
Stewing hen, boned	70	7	21	18	24	20	100						
Dry Ingredients													
Gelatin	13	0	85	0	20	0	3.5						
MSG	0	0	0	0	0	0	0.25						
Salt	.01	0	0	0	40	0	5						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	40						
Fruit & Vegetables													
Carrot	88	0	1	0	0	15	20						
Celery, fresh ground	94	0	1	0	0	0	17						
Pimiento	92	1	1	0	0	60	5						
Calculated composition 3% shrink													
Moisture							*77.2						
Fat							3.8						
Protein							13.2						
Properties													
% Collagen (Max. 35)							15.5						
Bind Points (Min. 1.8)							3.0						
Color Points (Min. 2)							2.3						

CHICKEN JELLIED LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Spices											
Onion powder	5	1	10	7							
Pepper black	11	8.5	12	7							

Processing Procedure

Section 3 of 4

A.

1. Cook in water
2. Strain broth, skim fat and dissolve gelatin
3. Bone and skin chicken
4. Dice and add broth in 1:1 ratio
5. Stuff
6. Cook in water to 150°F internal temperature

Cooking Form

Section 4 of 4

1. Pan

CHICKEN LOAF (Imitation)

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Tongue, cured	65	17	16	58	8	45	10	10					
Tripe, fresh	82	10	9	100	0	0			28	28	10	10	
Veal													
Lean	69	10	19	27	26	30	50		17	17	50		18
Pork													
Cheek meat	67	15	17	72	9	29		15				15	29
Ham fat, cured	15	81	4	93	0	0	5	5			5	5	
Picnic, cured	59	25	16	23	20	12	10	10			10	10	
Tongue, cured	65	17	16	58	8	45	10	10			10	10	
Trim 80 (lean)	60	23	16	25	16	25		50	22			50	
Trim Reg	34	58	8	36	10	8	15			22	15		
Tripe	74	15	10	100	0	0			33	33			53
Poultry													
Chicken													
Stewing hen, boned	70	7	21	18	24	20	2	2			2	2	
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5							18
Dry Ingredients													
Gelatin	13	0	85	0	20	0							5
MSG	0	0	0	0	0	0	0.12	0.15		0.17	0.4	0.4	
Salt	.01	0	0	0	40	0	1	1	2.8	3.3	1	1	3
Semolina flour	12	1	10	0	18	0			11	12			
Sugar (sucrose)	.06	0	0	0	10	0	0.25	0.25			0.25	0.25	
Fruit & Vegetables													
Celery, fresh ground	94	0	1	0	0	0				0.2			
Parsley, chopped	85	1	4	0	0	0					0.2		
Calculated composition 3% shrink													
Moisture							57.4	59.1	*63.6	*57.7	60.2	60.6	*70.2
Fat							23.7	23.1	13.2	19.9	22.2	22.3	11.5
Protein							16.1	15.4	12.4	10.7	14.9	14.7	14.8
Properties													
% Collagen (Max. 35)							34.0	*39.6	*55.3	*61.0	*35.4	*41.2	*54.0
Bind Points (Min. 1.8)							3.3	2.1	*1.5	*1.1	3.0	2.0	1.8
Color Points (Min. 2)							4.6	4.3	*1.7	*1.0	3.8	3.6	2.0

CHICKEN LOAF (Imitation)

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I					
Meat block													
Veal													
Lean	69	10	19	27	26	30	15						
Pork													
Cheek meat	67	15	17	72	9	29	25						
Tripe	74	15	10	100	0	0	60	15					
Poultry													
Chicken													
Stewing hen, boned	70	7	21	18	24	20		5					
Other Meats or Mixtures or Undesignated													
Bologna meat	56	30	12	39	20	31		80					
Cooking broth	99	0	1	0	0	5	25						
Dry Ingredients													
Gelatin	13	0	85	0	20	0	6						
MSG	0	0	0	0	0	0		0.12					
Salt	.01	0	0	0	40	0	3	3					
Sugar (sucrose)	.06	0	0	0	10	0		0.5					
Calculated composition 3% shrink													
Moisture							*72.4	56.0					
Fat							10.6	26.5					
Protein							13.8	12.1					
Properties													
% Collagen (Max. 35)							*53.3	*44.7					
Bind Points (Min. 1.8)							*1.6	2.2					
Color Points (Min. 2)							*1.6	3.2					

CHICKEN LOAF (Imitation)

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6		
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.5							
Spices											
Celery seed, ground	6	25	18		2	0.5	0.5	0.5			
Lemon Extract	20	5	0	1							
Mace	8	30	7	1							
Pepper black	11	8.5	12			3			0.6		
Pepper, white	11	8.5	1.3	4	4		3.5				
Vinegar, 100gr	94	0	0			14	16	16	18		

Processing Procedures

Section 4 of 5

- A.
1. Boil, bone, cube meat
 2. Mix
 3. Stuff
- B.
1. Cook chicken and hog stomach
 2. Bone and dice, save white meat
 3. Mix
 4. Chop
 5. Stuff
 6. Cook to internal temperature of 150°F
 7. Slice white meat, dip in gelatin
 8. Lay on top of loaf
 9. Dip total loaf in gelatin
- C.
1. Cook stomach
 2. Grind, mix
 3. Stuff
 4. Water cook, 165°F to internal temperature of 155°F
 5. Cold water, chill

Cooking Forms

Section 5 of 5

1. Cans
2. Molds
3. Cellophane casings

CHILI CON CARNE

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Cheek meat	70	20	18	59	14	48	45	22	22				
Chuck	66	16	18	30	24	38		27	25	66			
Cooking broth beef	99	0	1	0	0	0					90	90	
Fat	5	94	1	95	0	0	20			33			35
Heart	70	13	17	27	6	40	20						
Lip	66	17	17	90	0	1		32	34				
Suet, rendered	0	100	0	0	0	0		12	12				
Trim 90 (lean)	71	11	18	28	27	43							65
Trim 70	55	30	15	39	20	31		7	7		100	100	
Trim 40	27	65	7	36	8	14	15						
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	8	2			8	8	
Kidney bean, dry	10	2	22	0	0	0					40		
Non-fat dry milk	3	1	38	0	25	0			2				
Salt	.01	0	0	0	40	0	2	1.75	1.75	2	1	1	2.5
Soy flour	8	1	47	0	30	0							7
Moist Ingredients													
Oil	0	100	0	0	0	0		6	6				
Water or ice	100	0	0	0	0	0	25						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.15			0.12		0.13	
Onion	89	0	1	0	0	0	5.4					30	
Pimiento	92	1	1	0	0	60					0.08		
Tomato	92	0	1	0	0	60				4			
Tomato paste	75	1	3	0	0	90					0.5	0.5	
Tomato puree	87	0	2	0	0	70							8
Calculated composition 3% shrink													
Moisture							*57.9	53.2	53.1	46.6	*61.2	*74.2	45.5
Fat							28.6	*31.2	*31.3	*39.6	13.3	13.5	*35.2
Protein							9.7	14.1	14.6	11.7	11.0	7.6	13.6
Properties													
% Collagen (Max. 35)							*44.6	*58.7	*57.9	29.1	22.9	34.4	23.3
Bind Points (Min. 1.8)							*1.1	1.8	1.8	2.7	*1.4	*1.4	3.6
Color Points (Min. 2)							3.8	3.8	3.6	4.3	2.0	2.1	4.5

CHILI CON CARNE

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							H	I	J	K	L	
Beef												
Fat	5	94	1	95	0	0	25	25	23			
Plate	41	40	18	42	16	25	75					
Suet, rendered	0	100	0	0	0	0				28		
Trim 90 (lean)	71	11	18	28	27	43		75	70	65		
Turkey												
Fat	5	93	1	95	0	0					20	
Meat	68	7	24	18	23	19					80	
Dry Ingredients												
Cereal flour	12	1	10	0	18	0	8		7			
Corn flour	29	21	8	0	18	0		8.5				
Salt	.01	0	0	0	40	0	2	2.7	2.5	2.5	3.2	
Semolina flour	12	1	10	0	18	0					6	
Soy flour	8	1	47	0	30	0				7		
Moist Ingredients												
Water or ice	100	0	0	0	0	0	25				70	
Fruit & Vegetables												
Garlic, fresh	61	0	6	0	0	0			0.12			
Onion	89	0	1	0	0	0			5			
Tomato puree	87	0	2	0	0	70				8	10	
Calculated composition 3% shrink												
Moisture							39.7	49.7	50.8	47.0	*70.4	
Fat							*42.7	*31.1	28.2	*32.9	13.2	
Protein							11.9	13.4	13.0	14.1	11.0	
Properties												
% Collagen (Max. 35)							*41.2	27.8	27.6	21.7	18.1	
Bind Points (Min. 1.8)							1.8	3.5	3.4	3.9	2.5	
Color Points (Min. 2)							2.8	5.4	5.2	4.8	2.1	

CHILI CON CARNE

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Chili pepper	8	17	12	80	70	48	40	4			
Chili powder	8	12	14				128		64	50	
Cloves	7	22	6				1				
Coriander	5	18	15		6.5			6	6		
Cumin	8	22	18	12	0.5	9		8	8	10	
Garlic Powder	6	1	17	0.5			1	0.5		1.6	
Nutmeg	8	33	7		2.2			2	2		
Onion powder	5	1	10	3				8		10	
Oregano	7	10	11	4	3.2	4	1	3	3	2.5	
Paprika	10	13	15	8	1.6	12	1	24	24	17	
Pepper black	11	8.5	12	4						1.4	
Pepper, red	8	17	12				2.5			0.3	

CHILI CON CARNE

Section 4 of 5

Processing Procedures

- A.
 - 1. Grind, suet, garlic, onions, 3/8" plate
 - 2. Heat until onions are light brown
 - 3. Grind beef
 - 4. Mix
 - 5. Cook until mix is the appropriate consistency and meat is to a medium temperature
 - 6. Cool, add cereal to fat, mix
 - 7. Cook, 10 minutes
 - 8. Place in molds and chill
 - 9. Remove from molds
- B.
 - 1. Grind, meat
 - 2. Cook until tender
 - 3. Mix
 - 4. Cool to 115°F
 - 5. Stuff
 - 6. Room temperature, 20 min.
 - 7. Cool
- C.
 - 1. Grind meat
 - 2. Cook, fat, seasoning, meat
 - 3. Cool, stir to 120°F internal temperature
 - 4. Stuff, mold
- D.
 - 1. Melt suet
 - 2. Grind tissue
 - 3. Mix
 - 4. Cook, 4 hours, 180°F
 - 5. Add seasoning, mix
 - 6. Place in container to cool

Cooking Form

Section 5 of 5

- 1. Mold

CHINESE SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Pork													
Backfat	5	93	1	95	0	0	35	25					
Trim 80 (lean)	60	23	16	25	16	25	65	75					
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	2						
MSG	0	0	0	0	0	0		0.5					
Salt	.01	0	0	0	40	0	2.25	1.3					
Soy protein concentrate	8	0	75	0	45	0	2						
Sugar (sucrose)	.06	0	0	0	10	0	3	2.6					
Moist Ingredients													
Wine, sherry	85	0	0	0	0	10		1					
Wine, white	85	0	0	0	0	0	5						
Calculated composition 6% shrink													
Moisture							35.7	41.2					
Fat							*44.2	*40.9					
Protein							11.4	12.4					
Properties													
% Collagen (Max. 35)							24.0	26.4					
Bind Points (Min. 1.8)							2.2	1.9					
Color Points (Min. 2)							2.4	3.0					

CHINESE SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Spices											
Anise	10	16	18	1.6							
Cinnamon	10	3	4	2.4							
Pepper, white	11	8.5	1.3	1.6							
Soy sauce	63	1	6		80						

Processing Procedures

Section 3 of 4

- A.
1. Cube backfat, 1/4", add to boiling water for a few seconds
 2. Cube pork, 1/4"
 3. Mix
 4. Let stand 5 minutes
 5. Stuff, 42-44 mm casing
 6. Dry, 120°F, 6 hrs
 7. Chill, 18 hours, 38°F
- B.
1. Cube, lean 1.5 cm, fat 0.5 cm
 2. Mix
 3. Store, 38°F, 12 hrs
 4. Stuff
 5. Dip in 200°F water to shrink casing
 6. Dry, 105°F, 8 hours
 7. Freeze
 8. Fry before serving

Cooking Form

Section 4 of 4

1. A 42-44 mm casing

CHOP SUEY LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Cow F.C.	68	14	18	21	24	39	100						
Fat	5	94	1	95	0	0		20					
Veal													
Lean	69	10	19	27	26	30		40					
Pork													
Trim 80 (lean)	60	23	16	25	16	25		40	100				
Poultry													
Chicken													
Stewing hen	70	7	21	18	24	20				100			
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5				200			
Dry Ingredients													
Dextrose	.06	0	0	0	10	0		1					
Gelatin	13	0	85	0	20	0	1	1.5	1	1			
Macaroni	10	1	12	0	15	0			0.3				
Rice	12	1	7	0	40	0		20					
Salt	.01	0	0	0	40	0	1	1.5	1	1.7			
Soy protein concentrate	8	0	75	0	45	0				6			
Starch	12	1	0	0	30	0				14			
Sugar (sucrose)	.06	0	0	0	10	0				3.5			
Moist Ingredients													
Oil	0	100	0	0	0	0	3		3				
Water or ice	100	0	0	0	0	0		20					
Worcestershire sauce	62	1	6	0	0	90		1.5					
Fruit & Vegetables													
Bean sprouts	89	0	4	0	0	0	142		142	53			
Celery, fresh	94	0	1	0	0	0	170	25	170	60			
Mushroom	76	3	20	0	0	0				9			
Onion	89	0	1	0	0	0	17.2	35	29.4	15			
Pimiento	92	1	1	0	0	60	7		7				
Water chestnut	12	1	0	0	0	0				9			
Calculated composition 6% shrink													
Moisture							*85.2	*74.4	*83.5	*83.7			
Fat							3.9	9.1	5.8	1.6			
Protein							6.0	6.6	5.4	7.0			
Properties													
% Collagen (Max. 35)							14.3	15.7	16.2	11.4			
Bind Points (Min. 1.8)							*1.0	*1.1	*0.6	*1.6			
Color Points (Min. 2)							*1.6	*1.1	*0.9	*0.9			

CHOP SUEY LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Pepper black	11	8.5	12	5							
Soy sauce	63	1	6	300							

Processing Procedure

Section 3 of 4

A.

1. Cook suet and remove cracklins
2. Cook meat in fat
3. Cook rice, double boiler
4. Mix
5. Place in loaf pans
6. Chill, 18 hrs, 38°F
7. Dip in gelatin solution
8. Cool
9. Heat, slice to serve with equal amount of water.

Cooking Form

Section 4 of 4

1. Pan

CHORIZOS

Average Values

Section 1 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Cheek meat	70	20	18	59	14	48	30	20	20				
Cheekmeat, cured	70	20	18	59	14	48				25			
Chuck	66	16	18	30	24	38					11	11	
Cow F.C.	68	14	18	21	24	39					23	23	
Heart	70	13	17	27	6	40		15			11		15
Plate	41	40	18	42	16	25					23	23	
Trim 90 (lean)	71	11	18	28	27	43		30	30				30
Trim 70, cured	55	30	15	39	20	31				25			
Trim 70	55	30	15	39	20	31	30						
Tripe, fresh	82	10	9	100	0	0	20				9		
Pork													
Backfat	5	93	1	95	0	0	20			25			
Cheek meat	67	15	17	72	9	29							20
Heart	73	10	15	27	6	32			15			11	
Jowl, skinned	24	71	5	43	5	2					23	23	
Trim Reg	34	58	8	36	10	8		35	35				35
Tripe, cured	74	15	10	100	0	0				25		9	
Other Meats or Mixtures or Undesignated													
Rework	56	30	12	31	8	20	50						
Dry Ingredients													
Cereal flour	12	1	10	0	18	0					3.6	3.6	
Corn syrup solids	3.5	0	0	0	5	0		1	1				
Dextrose	.06	0	0	0	10	0	1						
Non-fat dry milk	3	1	38	0	25	0	5						
Salt	.01	0	0	0	40	0	3.25	3	3	1	2	2	3.4
Soy protein concentrate	8	0	75	0	45	0	5						
Sugar (sucrose)	.06	0	0	0	10	0				3	3.6	3.6	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	10	10		14	14	5
Calculated composition 7% shrink													
Moisture							50.1	56.4	56.8	49.0	54.7	54.4	54.1
Fat							*31.3	27.9	27.4	*38.0	26.7	26.8	28.3
Protein							14.5	13.5	13.3	10.6	11.7	11.6	14.0
Properties													
% Collagen (Max. 35)							*37.4	*37.3	*37.2	*62.3	34.7	*35.2	*40.1
Bind Points (Min. 1.8)							2.7	2.3	2.2	*1.3	1.9	1.9	2.2
Color Points (Min. 2)							3.2	5.0	4.7	3.2	3.4	3.2	4.5

CHORIZOS

Average Values

Section 2 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Beef													
Neck bone trim	70	10	20	22	30	40	35	35	33	33	33	33	33
Trim 40	27	65	7	36	8	14			33	33			
Veal													
Lean	69	10	19	27	26	30					33		
Pork													
Trim 80 (lean)	60	23	16	25	16	25	35	35				34	33
Trim Reg	34	58	8	36	10	8	30	30					
Trim 15 (fat)	11	85	3	60	3	1			33	33	33	34	33
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	1						
Salt	.01	0	0	0	40	0	3	3.4	3.4	3.4	3.4	3	3.4
Sugar (sucrose)	.06	0	0	0	10	0			6			0.4	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	5					
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.06		0.06			
Calculated composition 7% shrink													
Moisture							54.5	52.7	27.8	29.9	44.5	41.1	41.3
Fat							27.3	28.7	*52.4	*55.4	*36.4	*41.2	*40.9
Protein							14.1	14.9	9.8	10.4	14.6	13.5	13.5
Properties													
% Collagen (Max. 35)							25.4	24.3	29.1	29.0	26.9	26.1	26.2
Bind Points (Min. 1.8)							3.1	3.2	2.2	2.3	3.8	3.0	3.0
Color Points (Min. 2)							4.1	4.4	2.9	3.1	4.8	4.1	4.2

CHORIZOS

Average Values

Section 3 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	O	R	S	T	U
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	60	60	30	25			
Pork													
Backfat	5	93	1	95	0	0					25	25	
Cheek meat, cured	67	15	17	72	7	25			20				
Heart	73	10	15	27	6	32			15	25			
Trim 80 (lean)	60	23	16	25	16	25				25			100
Trim Reg	34	58	8	36	10	8	40	40	35	25			
Tripe, cured	74	15	10	100	0	0					25	25	
Other Meats or Mixtures or Undesignated													
Goat, cheek, cured	72	18	18	32	14	48					25		
Goat trim, cured	68	13	18	30	26	40					25		
Mutton, cheek, cured	72	18	18	32	14	48						25	
Mutton trim cured	68	13	18	30	26	40						25	
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	1						
Salt	.01	0	0	0	40	0	3	3.4	3.4	3.5	3	3	2
Sugar (sucrose)	.06	0	0	0	10	0					3	3	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	5	5				1
Fruit & Vegetables													
Garlic, fresh	.61	0	6	0	0	0					0.5	0.5	0.8
Calculated composition 7% shrink													
Moisture							54.9	53.2	54.5	54.3	51.7	51.7	56.2
Fat							28.1	29.6	27.9	26.5	*32.6	*32.6	23.8
Protein							13.2	13.9	13.7	14.8	11.1	11.1	16.6
Properties													
% Collagen (Max. 35)							29.8	29.8	*40.4	28.0	*46.9	*46.9	25.0
Bind Points (Min. 1.8)							3.1	3.2	2.1	2.4	*1.7	*1.7	2.7
Color Points (Min. 2)							4.6	4.9	4.1	4.5	3.7	3.7	4.1

CHORIZOS

Average Values

Section 4 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							V					
Pork												
Trim 80 (lean)	60	23	16	25	16	25	35					
Trim Reg	34	58	8	36	10	8	35					
Trim 15 (fat)	11	85	3	60	3	1	30					
Dry Ingredients												
Salt	.01	0	0	0	40	0	3					
Sugar (sucrose)	.06	0	0	0	10	0	0.4					
Calculated composition 7% shrink												
Moisture							30.1					
Fat							*56.0					
Protein							9.7					
Properties												
% Collagen (Max. 35)							31.6					
Bind Points (Min. 1.8)							*1.3					
Color Points (Min. 2)							*1.7					

CHORIZOS

Average Values

Section 5 of 9

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.2	0.2			
Na or K Nitrate	0.1	0	0	0.5	0.5		2	1	3	2	1
Na Erythorbate	0.1	0	0			0.87	0.87				0.87
Spices											
Bay leaves	5	8	8						0.5		
Cardamon	8	3.5	9					0.4			
Chili pepper	8	17	12	6	6	16			8	6	
Cinnamon	10	3	4						2		
Coriander	5	18	15				1	0.4			1
Cumin seed	8	22	18			8					
Garlic, Powder	6	1	17	0.25		2		0.1			
Ginger	9	4	8.5				1	0.6			1
Mustard seed, ground	6	24	30			16					
Oregano	7	10	11			6	0.2	0.1	1.75		0.2
Paprika	10	13	15	8	8	16	3	2.5	48	8	3
Pepper black	11	8.5	12				4	1.6			4
Pepper, red	8	17	12	4	4	16	0.5			4	0.5
Vinegar, normal	94	0	0	8	8	16	8	8	8	8	8

Average Values

Section 6 of 9

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11					
Spices											
Chili pepper	8	17	12	10	10	10					
Cumin seed	8	22	18	8	6						
Garlic, Powder	6	1	17			0.25					
Oregano	7	10	11	4							
Paprika	10	13	15		16	8					
Pepper black	11	8.5	12		6						
Vinegar, normal	94	0	0	8	16	8					

CHORIZOS

Section 7 of 9

Processing Procedures

- A.
 - 1. Grind
 - 2. Mix
 - 3. Store, 38°F, until cured
 - 4. Dry, 10 days, 56°F
 - 5. Light cool smoke
 - 6. Dry, 24 hours, 56°F
 - 7. Dry, 20 days
- B.
 - 1. Ten days in dry room, 54°F
 - 2. Light cool smoke
 - 3. Dry room, 24 hours, 54°F
 - 4. Dry for 21 days
- C.
 - 1. Grind, 1/4" plate
 - 2. Mix
 - 3. Stuff, 40-42 mm casing
 - 4. Dry, 38°F, 18 hrs.
- D.
 - 1. Grind
 - 2. Mix
 - 3. Store, 38°F, until cured
 - 4. Remix
 - 5. Stuff
 - 6. Sold fresh
- E.
 - 1. Grind
 - 2. Mix
 - 3. Stuff
 - 4. Smoke, 120°F, 1 hour
 - 5. Smoke, 130°F, 1 hour
 - 6. Smoke, 150°F, 2 hours
 - 7. Internal temperature of 133°F
 - 8. Shower to 100°F internal temperature
 - 9. Chill, 38°F
- F.
 - 1. Chop, beef trim
 - 2. Grind, other meat 3/16" plate
 - 3. Mix
 - 4. Stuff
 - 5. Smoke, cook to internal temperature of 150°F
 - 6. Chill

CHORIZOS

Section 8 of 9

Processing Procedures

G.

1. Chop, beef trim
2. Grind, other meat 3/16" plate
3. Mix
4. Stuff
5. Smoke, 6 hrs, 100°F
6. Room temperature, 24 hrs.

H.

1. Chill meat, 34°F
2. Grind pork, 1/2"
3. Grind beef, 1/8"
4. Mix
5. Regrind, 1/4"
6. Stuff, link
7. Cure, 36°F, 18 hours
8. Sell fresh

I.

1. Chill meat, 34°F
2. Grind pork, 1/2"
3. Grind beef, 1/8"
4. Mix
5. Regrind, 1/4"
6. Stuff, link
7. Cure, 36°F, 18 hours
8. Warm, 70°F, 2 hours
9. Smoke, 120°F
10. Chill to internal temperature of 50°F
11. Chill to 32°F or freeze

Cooking Forms

Section 9 of 9

1. Medium or wide hog casings
2. Narrow beef rounds
3. Narrow hog casings
4. Link 3"

COMBINATION LOAF

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Other Meats or Mixtures or Undesignated													
Loaf, 2-4 types	56	30	12	31	8	20	100						
Dry Ingredients													
Gelatin	13	0	85	0	20	0	2						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	12						
Calculated composition 5% shrink													
Moisture							57.8						
Fat							27.7						
Protein							12.7						
Properties													
% Collagen (Max. 35)							27.0						
Bind Points (Min. 1.8)							*1.2						
Color Points (Min. 2)							2.2						

Processing Procedure

Section 2 of 3

- A.
1. Cut into layers
 2. Paint or dip into gelatin
 3. Place in mold
 4. Store overnight
 5. Chill 28°F
 6. Slice

Cooking Form

Section 3 of 3

1. Mold

CORNED BEEF

Average Values

Section 1 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Brisket	65	15	18	40	12	19	100	100					
Bull F.C.	70	10	20	20	30	47			100				
Cow F.C.	68	14	18	21	24	39				100			
Plate	41	40	18	42	16	25					100	100	
Round	73	5	21	20	27	45							100
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.75	2.75	3	3	3.5	2.75	3.5
Moist Ingredients													
Water, hot	100	0	0	0	0	0	10.3	9.23			10.3	10.3	10.5
Calculated composition 15% shrink													
% Pump							13	12	DRY	DRY	12	13	12
Moisture							60.7	60.3	62.3	60.0	34.8	35.7	68.5
Fat							15.6	15.8	11.4	16.0	*42.0	*41.6	5.3
Protein							18.7	18.9	22.8	20.6	18.9	18.7	22.1
Properties													
% Collagen (Max. 35)							*40.0	*40.0	20.0	21.0	*42.0	*42.0	20.0
Bind Points (Min. 1.8)							2.3	2.3	6.9	5.0	3.0	3.3	6.0
Color Points (Min. 2)							3.6	3.6	10.7	8.0	4.7	4.7	9.9

CORNEB BEEF

Average Values

Section 2 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
Meat block							H							
Beef														
Rump	63	18	18	20	26	38	100							
Dry ingredients														
Salt	.01	0	0	0	40	0	3.5							
Moist Ingredients														
Water	100	0	0	0	0	0	12							
Calculated composition 15% shrink														
% Pump							12							
Moisture							58.7							
Fat							18.3							
Protein							18.3							
Properties														
% Collagen (Max. 35)							20.0							
Bind Points (Min. 1.8)							4.8							
Color Points (Min. 2)							7.0							

Average Values

Section 3 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Spices											
Celery seed	6	25	18	0.5							
Onion powder	5	1	10	2							
Pepper black	11	8.5	12	2							

CORNED BEEF

Section 4 of 6

Processing Procedures

A.

1. Pickle

85 pounds water
6.1 pounds salt
10.5 ounces nitrite
1 pound garlic powder
4 ounces Na erythorbate

2. Pump 12%

B.

1. Pickle, 8 gallon 68°F

13.5 pounds salt
62 pounds water
4 ounces nitrate
0.37 ounces nitrite

C.

1. Pickle

5 gallon water, 38°F
6 pounds salt
1 pound sugar
1 ounce nitrite

D.

1. Spice to add to 25 gallons of pickle

1 pound black pepper in bag
1-1/2 pound mixed spice in bag
3 gallon water
Simmer 2 hours, add strained liquid to pickle

Also add
2 pound sugar
8 ounce maple flavor
4 ounce fresh garlic

CORNED BEEF

Section 5 of 6

Processing Procedures

- E.
 - 1. Cure meat in 68°F pickle with spice
 - 2. Overhall, 10 days
 - 3. Cure completed in 21 days
 - 4. Dry
- F.
 - 1. Cure meat in 68°F pickle with spice
 - 2. Overhall, 10 days
 - 3. Cure completed in 21 days
 - 4. Dry
 - 5. Rubbed with garlic and pepper
 - 6. Smoke
- G.
 - 1. Pump, 15%
 - 2. Place in vat with spice
 - 3. Cover with pickle
 - 4. Cure, 38°F, 4 days
- H. Dry Cure
- I.
 - 1. Remove connective tissue
 - 2. Slice, 1"
 - 3. Simmer, 200°F
 - 4. Grind, 1"
 - 5. Mix with salt and nitrite
 - 6. Stuff
 - 7. Retort
 - 8. Chill

Cooking Forms

Section 6 of 6

- 1. Cans
- 2. Plastic bags

CORNED BEEF HASH

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	50						
Clod	72	7	20	25	27	42		100					
Cooking broth beef	99	0	1	0	0	0			25				
Corned beef, canned	44	32	22	30	18	16				100			
Cow F.C.	68	14	18	21	24	39			75		100	100	
Flank	43	42	13	24	12	20			25				
Shank, cured	73	6	20	48	28	30	50						
Trim 90 (lean)	71	11	18	28	27	43							100
Dry Ingredients													
Cereal flour	12	1	10	0	18	0		38					
Gelatin	13	0	85	0	20	0	1.5						
MGS	0	0	0	0	0	0							0.6
Non-fat dry milk	3	1	38	0	25	0		36					
Salt	.01	0	0	0	40	0	1.5	8	3	2.8	2.8	2.8	3
Moist Ingredients													
Oil	0	100	0	0	0	0		24					
Water or ice	100	0	0	0	0	0	10	140		100	63	63	41
Fruit & Vegetables													
Onion	89	0	1	0	0	0					8.6		
Potato, dehydrated	5	1	7	0	0	0				34	22	22	22
Potato, fresh	80	0	2	0	0	0	96						
Calculated composition 7% shrink													
Moisture							*92.8	*60.1	65.1	*58.6	*69.0	*68.1	*65.5
Fat							5.7	9.9	17.6	14.7	7.8	8.1	7.2
Protein							17.1	11.6	14.3	11.1	10.7	11.2	12.6
Properties													
% Collagen (Max. 35)							20.5	13.4	21.2	27.0	19.3	19.3	25.8
Bind Points (Min. 1.8)							3.1	3.0	3.0	1.8	2.4	2.5	3.1
Color Points (Min. 2)							4.0	2.6	5.0	*1.6	3.8	4.0	5.0

CORNED BEEF HASH

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
Meat block							H	I						
Beef														
Trim 90 (lean)	71	11	18	28	27	43	100	100						
Dry Ingredients														
MGS	0	0	0	0	0	0								
Salt	.01	0	0	0	40	0	3	3						
Moist Ingredients														
Water or ice	100	0	0	0	0	0	74							
Fruit & Vegetables														
Potato, dehydrated	5	1	7	0	0	0	22							
Potato, fresh	80	0	2	0	0	0		96						
Calculated composition 7% shrink														
Moisture							*71.4	*72.3						
Fat							6.1	5.9						
Protein							10.6	10.8						
Properties														
% Collagen (Max. 35)							25.7	25.2						
Bind Points (Min. 1.8)							2.6	2.6						
Color Points (Min. 2)							4.2	4.2						

CORNED BEEF HASH

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25					
Spices											
Celery seed	6	25	18	1			0.7				
Mustard seed, ground	6	29	30		4	2		6			
Onion powder	5	1	10		9	10	2.5				
Pepper black	11	8.5	12	12	1.9	6	2	2.8			
Pepper, white	11	8.5	1.3						4		
Vinegar	94	0	0		48						

Processing Procedures

Section 4 of 5

- A.
1. Cook meat until tender
 2. Grind
 3. Mix
 4. Stuff
 5. Ham retainer
 6. Cool
- B.
1. Grind meat, 3/8"
 2. Mix
 3. Stuff in cans
 4. Retort

Cooking Forms

Section 5 of 5

1. Cans
2. Molds

CORNED BEEF LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C				
Meat block													
Beef													
Comed beef, cured	44	30	23	30	20	16	100	50					
Trim 90 (lean)	71	11	18	28	27	43			100				
Dry Ingredients													
Dextrose	.06	0	0	0	10	0			1				
Gelatin	13	0	85	0	20	0		7.5					
Non-fat dry milk	3	1	38	0	25	0			15				
Noodle, raw	10	5	13	0	10	2		50					
Pistachio nut	5	54	19	0	0	0		6.2					
Salt	.01	0	0	0	40	0		2.5	5				
Moist Ingredients													
Mayonnaise	15	80	1	0	0	0		20					
Water or ice	100	0	0	0	0	0		37					
Fruit & Vegetables													
Pimiento	92	1	1	0	0	60		15					
Calculated composition 7% shrink													
Moisture							39.8	39.4	56.0				
Fat							*32.3	21.1	9.9				
Protein							24.7	14.8	21.1				
Properties													
% Collagen (Max. 35)							30.0	13.3	21.3				
Bind Points (Min. 1.8)							4.9	2.4	5.6				
Color Points (Min. 2)							4.0	*1.2	6.9				

CORNED BEEF LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	1							
Spices											
Allspice	8.5	8.7	6	2	2						
Bay leaves	5	8	8	3	4						
Celery seed	6	25	18			1.2					
Cloves	7	22	6	2	2						
Garlic, Powder	6	1	17	0.5							
Lemon Extract	20	5	0			1.2					
Mace	8	30	7			1.2					
Onion powder	5	1	10	1							
Parsley	85	1	4			5					
Pepper black	11	8.5	12	8							
Pepper, white	11	8.5	1.3		8	7.5					

CORNEB BEEF LOAF

Section 3 of 4

Processing Procedures

A.

1. Grind meat, 1-1/2" plate
2. Cook, 3-1/2 hours, 160°F, seasoning in bag
3. Stuff
4. Flatten

B.

1. Cook noodles in 160°F water until tender
2. Cut beef to 1/2" cube and add
3. Mix
4. Mold
5. Cook, 2 hours at 160°F
6. Cool, 12 hours at 40°F

C.

1. Grind, large plate
2. Mix salt, cure, 5 days, 38°F
3. Place in nets
4. Water cook
5. Mix
6. Stuff
7. Cool

Cooking Forms

Section 4 of 4

1. Pan
2. Molds
3. Artificial casing
4. Nets

COTECHINO

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Pork													
Skin	40	32	28	99	6	1	30						
Trim 80 (lean)	60	23	16	25	16	25	50						
Trim 15 (fat)	11	85	3	60	3	1	20						
Dry Ingredients													
Salt	.01	0	0	0	40	0	3.4						
Calculated composition 12% shrink													
Moisture							34.9						
Fat							*41.9						
Protein							18.9						
Properties													
% Collagen (Max. 35)							*62.1						
Bind Points (Min. 1.8)							2.0						
Color Points (Min. 2)							2.3						

COTECHINO

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrate	0.1	0	0	3							
Spices											
Cinnamon	10	3	4	1							
Cloves	7	22	6	1							
Nutmeg	8	33	7	0.5							
Pepper, white	11	8.5	1.3	4							

Processing Procedure

Section 3 of 4

A.

1. Chop, rind and pork trim
2. Cut fat into fine pieces
3. Mix
4. Store to cure
5. Stuff
6. Hang 50°F for 48 hours
65°F for 24 hours
52°F for 48 hours
7. Boil or cook

Cooking Forms

Section 4 of 4

1. Pork casing
2. Artificial casing

CRACKLING

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Backfat	5	93	1	95	0	0	75						
Skin	40	33	28	99	6	1	25						
Calculated composition 76% shrink													
Moisture							11.8						
Fat							22.8						
Protein							65.5						
Properties													
% Collagen (Max. 35)							*98.6						
Bind Points (Min. 1.8)							1.8						
Color Points (Min. 2)							*0.3						

Processing Procedures

Section 2 of 3

A.

1. Portion of rind and fat tissue remaining after lard is rendered

B.

1. Crackling bread
2. Press as much fat from rendered tissue as possible
3. Work into a dough with corn meal
4. Bake into bread

Cooking Form

Section 3 of 3

1. Kettle

CURING BRINE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A	B	C	D		
Dry Ingredients												
Phosphate	1	0	0	0	40	0	3.0					
Saccharin	0	0	0	0	0	0		0.025				
Salt	.01	0	0	0	40	0	14.5	18.6	9.0	7.1		
Sugar (sucrose)	.06	0	0	0	10	0	3.0	0	1.4	0.4		
Moist Ingredients												
Water or ice	100	0	0	0	0	0	79.3	81.2	88.9	92.2		
Calculated composition 0% shrink												
Moisture							79.5	99.9	89.6	92.5		
Fat							0	0	0	0		
Protein							0	0	0	0		
Salt							14.5	18.6	9.0	7.1		
Phosphate							3.0	0	0	0		
Sugar							3.0	0	1.4	0.4		

CURING BRINE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of brine							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	3.4	2.6	1.7	1				
Na or K Nitrate	0.1	0	0			1.7	12.3				
Prague Powder	0	0	0								
Na Ascorbate	0.1	0	0								
Na Erythorbate	0.1	0	0			1.4					

Processing Procedure

Section 3 of 4

A.

1. 18.6% salt, pump 10%

Cooking Form

Section 4 of 4

1. Vat

DANISH DRY SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Beef													
Trim 75	58	25	16	38	22	34	40						
Trim 60	45	43	12	40	16	25		50					
Pork													
Trim 80 (lean)	60	23	16	25	16	25	30	35					
Trim Reg	34	58	8	36	10	8	30	15					
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.25						
Salt	.01	0	0	0	40	0	3	3					
Sugar (sucrose)	.06	0	0	0	10	0	0.25						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.03	0.03					
Calculated composition 25% shrink													
Moisture							32.9	29.6					
Fat							*44.2	*49.5					
Protein							17.5	16.6					
Properties													
% Collagen (Max 3.5)							33.1	33.0					
Bind Points (Min. 1 .8)							3.1	2.6					
Color Points (Min. 2)							4.6	3.9					

DANISH DRY SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Anise seed, ground	10	16	18	0.5							
Bitters	3	14	8		2						
Caraway seeds	10	15	20	1							
Cinnamon	10	3	4	0.5							
Cloves	7	22	6	0.5							
Coriander	5	18	15		3	3					
Dill	7	4	20	0.75							
Ginger	9	4	8.5			2					
Marjoram	4	7	11		0.75	0.75					
Pepper, white	11	8.5	1.3	5	6	6					

Processing Procedures

Section 3 of 4

A.

1. Cure
2. Grind
3. Mix
4. Stuff
5. Hold, 24 hours, 38°F
6. Smoke and cook
7. Cook, hot water, prior to eating

B.

1. Cure
2. Grind
3. Mix
4. Stuff
5. Place in box
6. Sprinkle with salt and brown sugar
7. Hold 5 days, 30°F
8. Smoke and cook, to internal temperature of 140°F

Cooking Form

Section 4 of 4

1. Artificial casing

DEBRECZINER

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Beef													
Trim 80	63	20	17	30	24	39	50						
Pork													
Trim 80 (lean)	60	23	16	25	16	25		50					
Trim 50	36	52	10	34	12	9	50	50					
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.5	2.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20	20					
Calculated composition 12% shrink													
Moisture							50.8	49.4					
Fat							*33.4	*34.8					
Protein							12.5	12.1					
Properties													
% Collagen (Max. 35)							31.5	28.4					
Bind Points (Min. 1.8)							2.4	*1.7					
Color Points (Min. 2)							3.5	2.3					

DEBRECZINER

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na Erythorbate	0.1	0	0	0.87							
Spices											
Caraway seed, ground	10	15	20	3.5							
Garlic Powder	6	1	17	1							
Pepper black	11	8.5	12	3.5							

Processing Procedures

Section 3 of 4

A.

1. Grind, 1/4" plate
2. Preblend
3. Chop, 1/3 fine
4. Chop, 2/3 coarse
5. Mix
6. Stuff
7. Cook and heavy smoke to 155°F internal temperature

Cooking Form

Section 4 of 4

1. Use 22-30 mm casings

DEVILED HAM

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Pork													
Ham fat, cured	15	81	4	93	0	0	33	33					
Ham, smoked	71	7	20	24	15	18	67						
Ham, trim, cooked	60	10	23	27	15	15		67					
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	33	50					
Dry Ingredients													
Salt	.01	0	0	0	40	0		3					
Moist Ingredients													
Worcestershire sauce	62	1	6	0	0	90		0.04					
Calculated composition 8% increase in wt.													
Moisture							*66.7	*64.7					
Fat							21.9	20.2					
Protein							10.5	10.4					
Properties													
% Collagen (Max. 35)							29.5	31.3					
Bind Points (Min. 1.8)							*1.4	*1.4					
Color Points (Min. 2)							*1.7	*1.3					

DEVILED HAM

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	4							
Spices											
Mustard seed, ground	6	24	30	0.6	7.5						
Paprika	10	13	15		0.3						
Pepper, red	8	17	12	0.2	0.4						
Pepper, white	11	8.5	1.3	3	0.1						
Tumeric	11	10	8		0.4						

DEVEILED HAM

Section 3 of 4

Processing Procedures

A.

1. Pump ham 10% with

16.5 pounds water
2.7 pounds salt
0.6 ounce sodium nitrite
2.5 ounce sodium nitrate
0.6 pounds sugar

2. Cover with diluted brine (50°)
3. Cure 10 days
4. Bone ham and cube, 1 pound cubes with some fat
5. Cook in water
6. Grind hams and fat, 1/2"
7. Mix
8. Regrind, 1/16"
9. Place in cans hot
10. Retort

B.

1. Cut, lean into, 1 pound cubes
2. Water cook
3. Grind, lean and fat, 1/2"
4. Mix
5. Regrind, 1/16"
6. Stuff
7. Retort

Cooking Form

Section 4 of 4

1. Cans, 3 oz.

DICED LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Other Meats or Mixtures or Undesignated												
Bologna, broken	56	30	12	31	8	20	100					
Dry Ingredients												
Gelatin	13	0	85	0	20	0	3					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	12					
Calculated composition 0% shrink												
Moisture							59.5					
Fat							26.1					
Protein							12.7					
Properties												
% Collagen (Max. 35)							25.5					
Bind Points (Min. 1.8)							*1.3					
Color Points (Min. 2)							2.1					

DICED LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Lemon Extract	20	5	0	1							
Vinegar	94	0	0	32							

Processing Procedure

Section 3 of 4

A.

1. Dice bologna
2. Mix with heavy gelatin

Cooking Form

Section 4 of 4

1. Loaf pan

DRIED BEEF LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Clod	72	7	20	25	27	42	100						
Round	73	5	21	20	27	45		100					
Trim 90 (lean)	71	11	18	28	27	43			100				
Dry Ingredients													
MSG	0	0	0	0	0	0	0.06		0.06				
Salt	.01	0	0	0	40	0	4	4	4				
Sugar, brown	2	0	0	0	0	0			2.2				
Moist Ingredients													
Corn syrup	20	0	0	0	5	0	0.5	0.5	2.2				
Water or ice	100	0	0	0	0	0			10				
Calculated composition 8% shrink													
Moisture							66.3	67.3	66.1				
Fat							7.3	5.2	10.1				
Protein							20.8	21.8	16.5				
Properties													
% Collagen (Max. 35)							25.0	20.0	28.0				
Bind Points (Min. 1.8)							5.6	5.9	4.5				
Color Points (Min. 2)							8.7	9.8	7.1				

DRIED BEEF LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
<u>Curing Ingredients</u>											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0	0.5	0.25						
Prague Powder	0	0	0			4					
Na Erythorbate	0.1	0	0		1	1					

Processing Procedures

Section 3 of 4

A.

1. Grind, 1/2" plate
2. Mix
3. Place in mold
4. Cook in water bath at 180°F for 4 hours
5. Keep pressure on top of mold, internal temperature to 160°F
6. Dry in smokehouse, 4 hours at 130°F

B.

1. Grind
2. Mix
3. Cure, 4 days, 40°F
4. Stuff
5. Cook to internal temperature of 160°F
6. Smoke

Cooking Forms

Section 4 of 4

1. Loaf pan
2. Mold

DUTCH LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Bull F.C.	70	10	20	20	30	47	35						
Cow F.C.	68	14	18	21	24	39		35					
Trim 90 (lean)	71	11	18	28	27	43			20				
Trim 70	55	30	15	39	20	31				40			
Veal													
Lean	69	10	19	27	26	30				15	35	25	20
Pork													
Bacon ends	19	68	12	86	1	3						15	
Check meat	67	15	17	72	9	29			40				40
Head meat	65	16	17	70	7	16				15		5	
Liver	73	7	19	24	2	49				15		5	
Trim 80 (lean)	60	23	16	25	16	25	30	30			35	55	
Trim Reg	34	58	8	36	10	8	35	35	40	30			40
Dry Ingredients													
Cereal flour	12	1	10	0	18	0			5				5
Cheese, cheddar	37	32	25	0	0	1				10			
Corn syrup solids	3.5	0	0	0	5	0			2				2
Dextrose	0.6	0	0	0	10	0						1	
Farina	10	1	11	0	16	0					3		
MSG	0	0	0	0	0	0				0.12			
Non-fat dry milk	3	1	38	0	25	0			2.5			12	2.5
Salt	.01	0	0	0	40	0	2.75	2.75	3	3	3	4	3
Soy protein concentrate	.8	0	75	0	45	0	3	3	2.5				2.5
Sugar (sucrose)	.06	0	0	0	10	0	0.4	0.4		0.5	0.5		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	10	20	10	15		20
Worcestershire sauce	62	1	6	0	0	90				0.5			
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0							0.12
Onion	89	0	1	0	0	0	3	0.2					4
Calculated composition 6% shrink													
Moisture							53.7	52.2	53.1	51.5	63.6	44.5	53.9
Fat							27.4	29.4	24.8	*30.1	14.3	24.2	23.9
Protein							15.1	14.8	13.3	14.3	15.5	18.9	13.1
Properties													
% Collagen (Max. 35)							21.3	21.8	*41.7	27.9	*38.2	25.3	*41.3
Bind Points (Min. 1.8)							3.7	3.3	2.4	1.9	2.7	3.6	2.4
Color Points (Min. 2)							4.2	3.5	3.0	3.7	3.7	3.5	2.6

DUTCH LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25				
Na or K Nitrate	0.1	0	0	1	1	0.5		1			
Na Erythorbate	0.1	0	0	0.87							
Spices											
Caraway	10	15	20			1.5					
Cardamon	8	3.5	9					0.5			
Garlic, Powder	6	1	17			0.25					
Ginger	9	4	8.5				1	1			
Mace	8	30	7					0.5			
Marjoram	4	7	11		2		2				
Mustard seed, ground	6	24	30	2			2				
Nutmeg	8	33	7	1			2				
Onion chips	4	1	9	8							
Pepper black	11	8.5	12	4			4				
Pepper, white	11	8.5	1.3		8	1.5		6			
Sage	3	14	8.5	1	2						
Vinegar	94	0	0			3					

DUTCH LOAF

Section 3 of 4

Processing Procedures

- A.
1. Grind, 1/4"
 2. Mix
 3. Cure, 1 hour, 40°F
 4. Stuff
 5. Cook at 165°F in water to internal temperature of 152°F
 6. Shower to 120°F
 7. Chill, 18 hours, 38°F
- B.
1. Grind
 2. Mix
 3. Cure, 1 hour, 40°F
 4. Place in mold
 5. Bake
 - 120°F, 30 minutes
 - 150°F, 30 minutes
 - 180°F, 30 minutes
 - 200°F to internal temperature of 152°F
 6. Chill
- C.
1. Chill meat to 32°F
 2. Grind pork, 1/4"
 3. Grind beef, 1/8"
 4. Chop, beef
 5. Mix
 7. Bake to internal temperature of 155°F
 8. Chill

Cooking Forms

Section 4 of 4

1. Fibrous casing
2. loaf pans
3. Mold

FARMERS SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	35						
Trim 90 (lean)	71	11	18	28	27	43		80					
Trim 75	58	25	16	38	22	34			40				
Pork													
Backfat	5	93	1	95	0	0	13	5					
Jowl, skinned	24	71	5	43	5	2				15			
Liver	73	7	19	24	2	49				30			
Trim 80 (lean)	60	23	16	25	16	25	52	15		15			
Trim 50	36	52	10	34	12	9				40			
Trim Reg	34	58	8	36	10	8			60				
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0		1					
Dextrose	.06	0	0	0	10	0	0.1		0.25				
Salt	.01	0	0	0	40	0	3.4	3.75	3	1.5			
Sugar (sucrose)	.06	0	0	0	10	0	0.1		0.25				
Fruit & Vegetables													
Onion	89	0	1	0	0	0				1			
Calculated composition 25% shrink													
Moisture							37.4	50.8	22.8	31.4			
Fat							*38.2	21.5	*57.7	*48.1			
Protein							19.0	21.4	14.4	16.7			
Properties													
% Collagen (Max. 35)							27.7	27.8	*37.2	28.4			
Bind Points (Min. 1.8)							3.7	5.4	2.6	*1.3			
Color Points (Min. 2)							5.8	8.6	3.3	4.9			

FARMERS SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0		3	3					
Spices											
Allspice	8.5	8.7	6				1.25	1.25			
Coriander	5	18	15		3						
Ginger	9	4	8.5		2		1.5	1.5			
Marjoram	4	7	11				3	3			
Nutmeg	8	33	7		2		1.5	1.5			
Onion powder	5	1	10				1				
Pepper, white	11	8.5	1.3		6	4	3.25	3.25			
Pepper, white, cracked	11	8	10			2					
Sage	3	14	8.5		1						

FARMERS SAUSAGE

Section 3 of 4

Processing Procedures

- A.
 - 1. Grind
 - 2. Mix
 - 3. Cure, 38°F
 - 4. Stuff
 - 5. Hang, 30°F, 4 days
 - 6. Heavy smoke, 10 hours, 125°F
 - 7. Cook, 160°F to internal temperature of 140°F
- B.
 - 1. Grind
 - 2. Mix
 - 3. Cure, 38°F
 - 4. Stuff
 - 5. Green room, 5 days
 - 6. Smoke, 24 hours, 70°F
 - 7. Dry room, 50 days
- C.
 - 1. Grind
 - 2. Mix
 - 3. Cure, 3 days, 36°F
 - 4. Stuff
 - 5. Hold, 75°F, 80% RH, 12 hours
 - 6. Heavy smoke, 75°F, 75% RH
 - 7. Dry, 30 days, 54°F, 65% RH
- D.
 - 1. Blanch (hot water), liver
 - 2. Precook, pork
 - 3. Chop, liver till bubbly, add pork
 - 4. Stuff in liver sausage casing
 - 5. Cook, steam or water, 170°F to internal temperature of 155°F
 - 6. Chill in ice water bath
 - 7. Cold smoke

Cooking Forms

Section 4 of 4

- 1. Use 3-3-1/2 beef middles
- 2. Protein lined casings
- 3. Double wall bungs
- 4. Liver sausage casing

FRANKFURTER

Average Values

Section 1 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	75	70	70	70	60	60	60
Fat, brisket	5	93	1	95	0	0		30					
Plate	41	40	18	42	16	25					40		
Pork													
Backfat	5	93	1	95	0	0	25		20	20			
Trim 80 (lean)	60	23	16	25	16	25						20	20
Trim Reg	34	58	8	36	10	8			10	10		20	
Trim, 15 (fat)	11	85	3	60	3	1							20
Dry Ingredients													
Cereal flour	12	1	10	0	18	0						3.5	
Non-fat dry milk	3	1	38	0	25	0	3.5		3.5				3.5
Salt	.01	0	0	0	40	0	3	2.75	2.75	2.75	3	2.5	2.75
Soy protein concentrate	8	0	75	0	45	0				3.5			
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.4	0.5	0.5	0.5		0.5
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20	20	10	10	25	25	10
Fruit & Vegetables													
Onion	89	0	1	0	0	0		0.2					
Calculated composition 10% shrink													
Moisture							53.5	52.6	49.3	49.5	61.0	62.0	52.0
Fat							26.9	*31.4	29.9	29.9	19.0	18.9	26.3
Protein							14.5	12.9	15.5	16.8	16.6	14.5	16.3
Properties													
% Collagen (Max. 35)							19.5	21.5	20.1	18.6	28.3	22.1	20.8
Bind Points (Min. 1.8)							4.2	3.8	4.4	5.2	4.1	3.7	4.3
Color Points (Min. 2)							6.2	5.9	6.3	6.3	6.4	5.6	6.1

FRANKFURTER

Average Values

Section 2 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	60	60	60	60	60	60	60
Pork													
Trim Reg	34	58	8	36	10	8	40	40	40	40	40	40	40
Dry Ingredients													
Cheese, cheddar	37	32	25	0	0	1	30	15					
MSG	0	0	0	0	0	0			0.2				
Non-fat dry milk	3	1	38	0	25	0	5			3.5			
Salt	.01	0	0	0	40	0	3	3	2.75	2.75	3	3	3
Soy protein concentrate	8	0	75	0	45	0			3.5				
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5	0.5	0.5	1	0.5	0.5
Moist Ingredients													
Water or ice	100	0	0	0	0	0			10	10	40	20	20
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.01					0.06	
Onion	89	0	1	0	0	0	3						
Calculated composition 10% shrink													
Moisture							43.5	46.2	51.5	51.4	*62.7	56.9	56.9
Fat							*30.5	*31.9	27.7	27.8	22.5	26.3	26.3
Protein							19.3	17.8	16.9	15.7	11.7	13.7	13.7
Properties													
% Collagen (Max. 35)							14.5	18.7	20.0	21.5	23.4	23.3	23.3
Bind Points (Min. 1.8)							3.5	3.7	4.8	4.0	3.0	3.5	3.5
Color Points (Min. 2)							4.7	5.6	5.6	5.6	4.5	5.3	5.3

FRANKFURTER

Average Values

Section 3 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	Q	R	S	T	U
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	60	60	55	50	50	40	40
Fat, brisket	5	93	1	95	0	0						35	
Trim 40	27	65	7	36	8	14							20
Veal													
Lean	69	10	19	27	26	30						25	
Pork													
Cheek meat	67	15	17	72	9	29							15
Trim 50	36	52	10	34	12	9			45				
Trim Reg	34	58	8	36	10	8	35			50	50		25
Trim, 15 (fat)	11	85	3	60	3	1		20					
Dry Ingredients													
MSG	0	0	0	0	0	0				0.25	0.25		
Non-fat dry milk	3	1	38	0	25	0	5		3.5	3.5			3.5
Salt	.01	0	0	0	40	0	3	2.75	2.5	2.75	2.75	2.75	2.75
Soy protein concentrate	8	0	75	0	45	0		3.5			3.5		
Sugar (sucrose)	.06	0	0	0	10	0		0.5		0.5	0.5	0.4	0.5
Moist Ingredients													
Water or ice	100	0	0	0	0	0	25	10	20	10	10	20	10
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0						0.06	
Calculated composition 10% shrink													
Moisture							57.5	53.5	54.9	47.9	48.0	49.3	47.9
Fat							22.9	24.7	25.5	*32.3	*32.3	*35.2	*32.2
Protein							14.5	17.7	14.8	14.6	15.8	11.8	14.5
Properties													
% Collagen (Max. 35)							20.4	28.0	22.2	22.4	20.7	27.1	30.6
Bind Points (Min. 1.8)							3.8	4.9	3.7	3.5	4.4	3.3	3.1
Color Points (Min. 2)							5.1	6.3	4.9	4.8	4.8	4.7	4.6

FRANKFURTER

Average Values

Section 4 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							V	W	X	Y	Z	AA	AB
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	40	40	40	30	30	30	20
Cheek meat	70	20	18	59	14	48				30	30		20
Trim 40	27	65	7	36	8	14	20						
Tripe, fresh	82	10	9	100	0	0							10
Veal													
Lean	69	10	19	27	26	30		20	20			20	20
Pork													
Cheek meat	67	15	17	72	9	29	15			10	10	35	
Jowl, skinned	24	71	5	43	5	2				30	30		
Trim Reg	34	58	8	36	10	8	25	40	40				30
Dry Ingredients													
Dextrose	.06	0	0	0	10	0						1	
MSG	0	0	0	0	0	0				0.25			
Non-fat dry milk	3	1	38	0	25	0		7	5	3.5		5	
Salt	.01	0	0	0	40	0	2.75	2.5	3	2.75	2.75	3	3
Soy protein concentrate	8	0	75	0	45	0	3.5				3.5		
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5	0.5	0.5	0.5		0.4
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	20	25	10	10		25
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0					0.015		
Calculated composition 10% shrink													
Moisture							48.1	53.5	55.9	51.6	42.5	58.1	*62.6
Fat							*32.1	25.0	24.3	*30.2	*30.3	13.6	22.8
Protein							15.8	15.1	14.1	15.1	16.4	20.6	12.7
Properties													
% Collagen (Max. 35)							28.1	21.4	22.3	*39.3	*36.3	*36.0	*38.9
Bind Points (Min. 1.8)							3.9	3.7	3.5	3.0	3.8	4.5	2.5
Color Points (Min. 2)							4.6	4.4	4.3	5.6	5.6	6.8	4.3

FRANKFURTER

Average Values

Section 5 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AC	AD	AE	AF	AG	AH	AI
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	20	20	18	17	15	15	
Cheek meat	70	20	18	59	14	48			17	17			30
Cow F.C.	68	14	18	21	24	39							30
Trim 90 (lean)	71	11	18	28	27	43					50		
Trim 60	45	43	12	40	16	25						50	
Tripe, cooked	80	2	19	100	0	0			13				
Veal													
Lean	69	10	19	27	26	30	45	45	17	17			
Pork													
Cheek meat	67	15	17	72	9	29						25	10
Jowl, skinned	24	71	5	43	5	2							30
Trim 80 (lean)	60	23	16	25	16	25					10	10	
Trim 50	36	52	10	34	12	9				35			
Trim Reg	34	58	8	36	10	8	35	35	35		25		
Tripe	74	15	10	100	0	0				14			
Dry Ingredients													
Cereal flour	12	1	10	0	18	0			4.5	4.3			
Dextrose	.06	0	0	0	10	0	1						
Mustard, heat treated	6	25	31	0	16	5	1						
Non-fat dry milk	3	1	38	0	25	0	4.5	5			5	5	3.5
Salt	.01	0	0	0	40	0	3	3	3	3	3	3	2.75
Sugar (sucrose)	.06	0	0	0	10	0					0.5	0.5	0.5
Moist Ingredients													
Water or ice	100	0	0	0	0	0	36	30	20	20	20	25	10
Fruit & Vegetables													
Onion	89	0	1	0	0	0					0.2		
Calculated composition 10% shrink													
Moisture							60.0	59.0	57.8	57.8	58.7	56.2	51.1
Fat							20.7	21.6	24.0	23.7	20.6	24.2	31.4
Protein							13.3	13.9	13.6	13.1	15.1	13.9	14.6
Properties													
% Collagen (Max. 35)							23.7	23.8	*44.1	*39.6	24.2	*38.6	*40.3
Bind Points (Min. 1.8)							3.2	3.4	2.4	2.4	3.7	2.5	2.5
Color Points (Min. 2)							3.6	3.8	3.8	3.8	5.0	3.8	5.0

FRANKFURTER

Average Values

Section 6 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AJ	AK	AL	AM	AN	AO	AP
Meat block													
Beef													
Cheek meat	70	20	18	59	14	48	30	20	10				
Chuck	66	16	18	30	24	38				60	36	10	
Cow F.C.	68	14	18	21	24	39	30					34	75
Lip	66	17	17	90	0	1		20					
Trim 90 (lean)	71	11	18	28	27	43			40				
Trim 75	58	25	16	38	22	34						6	
Trim 50	38	50	11	42	12	19						50	
Tripe, fresh	82	10	9	100	0	0		20					
Pork													
Backfat	5	93	1	95	0	0		20					25
Cheek meat	67	15	17	72	9	29	10						
Jowl, skinned	24	71	5	43	5	2	30						
Tongue	63	19	17	66	8	36			10				
Trim 50	36	52	10	34	12	9					64		
Trim Reg	34	58	8	36	10	8			40	40			
Other Meats or Mixtures or Undesignated													
Rework	56	30	12	31	8	20		20					
Dry Ingredients													
Cereal flour	12	1	10	0	18	0			2				
Corn syrup solids	3.5	0	0	0	5	0						2	
Dextrose	.06	0	0	0	10	0		1					
Non-fat dry milk	3	1	38	0	25	0				5	6		3.5
Salt	.01	0	0	0	40	0	2.75	2.5	3	3	3.5	3	3
Soy protein concentrate	8	0	75	0	45	0	3.5						
Sugar (sucrose)	.06	0	0	0	10	0	0.5		1				0.5
Textured veg. protein	8	1	50	0	35	0		20			9.5		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	20	40	25	68	33	20
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.015						
Calculated composition 10% shrink													
Moisture							51.3	48.8	*61.6	54.3	*57.7	*57.5	52.2
Fat							*31.4	26.5	24.0	27.4	23.3	*30.5	29.6
Protein							15.8	16.6	10.7	13.3	11.8	11.6	13.2
Properties													
% Collagen (Max. 35)							*37.3	*36.9	*38.0	27.6	20.7	31.2	20.4
Bind Points (Min. 1.8)							3.3	3.2	2.1	2.8	2.7	2.2	3.1
Color Points (Min. 2)							5.0	*1.7	3.7	3.6	*1.8	3.6	4.6

FRANKFURTER

Average Values

Section 7 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AO	AR	AS	AT	AU	AV	AW
Meat block													
Beef													
Cow F.C.	68	14	18	21	24	39	70	70	70	70	60	60	60
Pork													
Backfat	5	93	1	95	0	0	30	20	20				
Cheek meat	67	15	17	72	9	29					20	20	
Jowl, skinned	24	71	5	43	5	2							40
Trim Reg	34	58	8	36	10	8		10	10	30			
Trim 15 (fat)	11	85	3	60	3	1					20	20	
Dry Ingredients													
Mustard, heat treated	6	25	31	0	16	5	1						1
Non-fat dry milk	3	1	38	0	25	0		3.5			3.5		
Plant protein hydrolysate	8	0	30	0	20	0						0.12	
Salt	.01	0	0	0	40	0	3	2.75	2.75	2.5	2.75	2.75	3
Soy protein concentrate	8	0	75	0	45	0			3.5			3.5	
Sugar (sucrose)	.06	0	0	0	10	0		0.5	0.5	0.5	0.5	0.5	
Moist Ingredients													
Corn syrup	20	0	0	0	5	0	2						2
Water or ice	100	0	0	0	0	0		10	10	20	10	10	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0						0.015	
Calculated composition 10% shrink													
Moisture							40.8	48.0	48.2	59.2	52.2	52.3	42.2
Fat							*39.8	*32.6	*32.5	24.6	27.1	27.0	*38.8
Protein							13.8	14.2	15.4	13.6	15.4	16.6	13.7
Properties													
% Collagen (Max. 35)							22.3	20.9	19.3	23.3	31.4	29.1	23.9
Bind Points (Min. 1.8)							3.2	3.3	4.1	2.9	3.1	3.9	2.9
Color Points (Min. 2)							5.2	4.7	4.7	4.6	5.0	4.9	4.5

FRANKFURTER

Average Values

Section 8 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AX	AY	AZ	BA	BB	BC	BD
Meat block													
Beef													
Cow F.C.	68	14	18	21	24	39	60	60	60	55	50	50	40
Trim 40	27	65	7	36	8	14							20
Pork													
Cheek meat	67	15	17	72	9	29							15
Trim Reg	34	58	8	36	10	8	40	40	40	45	50	50	25
Dry Ingredients													
MSG	0	0	0	0	0	0	0.25				0.25		
Mustard, heat treated	6	25	31	0	16	5				1			
Non-fat dry milk	3	1	38	0	25	0		3.5			3.5		3.5
Salt	.01	0	0	0	40	0	2.75	2.75	2.75	3	2.75	2.75	2.75
Soy protein concentrate	8	0	75	0	45	0	3.5					3.5	
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5	0.5		0.5	0.5	0.5
Moist Ingredients													
Corn syrup	20	0	0	0	5	0				2			
Water or ice	100	0	0	0	0	0	10	10	28		10	10	10
Calculated composition 10% shrink													
Moisture							50.3	50.3	*58.6	44.6	46.9	47.2	47.9
Fat							30.0	*30.1	26.8	*35.7	*34.2	*34.3	*32.2
Protein							15.8	14.6	11.9	14.5	13.6	14.9	14.5
Properties													
% Collagen (Max. 35)							20.6	22.3	24.3	24.4	23.3	21.3	30.5
Bind Points (Min. 1.8)							3.9	3.1	2.5	2.9	2.7	3.6	3.1
Color Points (Min. 2)							4.2	4.3	3.8	4.4	3.6	3.6	4.6

FRANKFURTER

Average Values

Section 9 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							BE	BF	BG	BH	BI	BJ	BK
Meat block													
Beef													
Cow F.C.	68	14	18	21	24	39	40	30	30	10			
Flank	43	42	13	24	12	20					30		
Heart	70	13	17	27	6	40						27	20
Plate	41	40	18	42	16	25						35	
Trim 80	63	20	17	30	24	39					70		
Trim 75	58	25	16	38	22	34		15					45
Trim 40	27	65	7	36	8	14	20						
Veal													
Lean	69	10	19	27	26	30			20	20			
Pork													
Backfat	5	93	1	95	0	0						10	
Cheek meat	67	15	17	72	9	29	15	12					
Defatted solids	10	3	86	95	0	0		15					
Stomach	71	13	15	62	1	0						28	
Trim 80 (lean)	60	23	16	25	16	25				30			
Trim 50	36	52	10	34	12	9			50	40			
Trim Reg	34	58	8	36	10	8	25	28					35
Dry Ingredients													
Cereal flour													3
Dextrose	.06	0	0	0	10	0			1			2	
Non-fat dry milk	3	1	38	0	25	0		3.5		3.5			
Salt	.01	0	0	0	40	0	2.75	3	3	2.5	2.6	2.5	3
Soy protein concentrate	8	0	75	0	45	0	3.5					4	
Sugar (sucrose)	.06	0	0	0	10	0	0.5			0.5	1		0.5
Moist Ingredients													
Corn syrup	20	0	0	0	5	0			2.5		2	2	
Water or ice	100	0	0	0	0	0	10	30	25	20	25	30	30
Calculated composition 10% shrink													
Moisture							47.4	52.6	54.5	53.1	59.0	55.6	*55.9
Fat							*33.6	21.6	27.2	27.3	22.6	24.1	27.8
Protein							15.0	21.4	12.0	13.8	13.4	14.4	11.2
Properties													
% Collagen (Max. 35)							29.0	*63.1	27.2	25.2	28.6	*36.2	34.0
Bind Points (Min. 1.8)							3.3	2.1	2.4	2.6	2.8	2.1	1.8
Color Points (Min. 2)							3.7	3.0	3.1	3.0	4.6	2.7	3.3

FRANKFURTER

Average Values

Section 10 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							BL	BM	BN	BO	BP	BQ	BR
Beef													
Heart	70	13	17	27	6	40	20	6					
Lip	66	17	17	90	0	1			5	5			
Plate	41	40	18	42	16	25		24			35		
Tongue	66	16	18	60	7	61		28					
Trim 90 (lean)	71	11	18	28	27	43		28	35	30		65	60
Trim 75	58	25	16	38	22	34	45						
Tripe, fresh	82	10	9	100	0	0			5	10			
Veal													
Lean	69	10	19	27	26	30			10	10			
Pork													
Backfat	5	93	1	95	0	0					10		
Heart	73	10	15	27	6	32			13	10	27		
Jowl, skinned	24	71	5	43	5	2		14					
Snout	45	40	14	80	2	1			5	5			
Stomach	71	13	15	62	1	0					28		
Trim 50	36	52	10	34	12	9							20
Trim Reg	34	58	8	36	10	8	35		22	25		35	20
Dry Ingredients													
Dextrose	.06	0	0	0	10	0		3			2		
Non-fat dry milk	3	1	38	0	25	0	3.5		5	5			5
Salt	.01	0	0	0	40	0	3	3.4	3	3	2.5	2.5	3
Soy protein concentrate	8	0	75	0	45	0		5			4		
Sugar (sucrose)	.06	0	0	0	10	0	0.5		0.5	0.5			
Moist Ingredients													
Com syrup	20	0	0	0	5	0		3			2		
Water or ice	100	0	0	0	0	0	30	38	35	30	30	25	25
Fruits & Vegetables													
Garlic, fresh	61	0	6	0	0	0							0.015
Calculated composition 10% shrink													
Moisture							55.5	58.0	*63.9	*62.0	56.2	*61.3	57.2
Fat							27.7	20.3	17.9	19.7	23.4	23.9	23.9
Protein							11.9	14.5	12.7	12.6	14.0	12.6	13.6
Properties													
% Collagen (Max. 35)							31.6	34.3	32.9	*35.5	*36.4	29.6	26.3
Bind Points (Min. 1.8)							2.1	3.1	2.4	2.3	2.1	3.0	3.2
Color Points (Min. 2)							3.3	4.9	3.3	3.0	2.3	4.6	4.1

FRANKFURTER

Average Values

Section 11 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							BS	BT	BU	BV	BW	BX	BY
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	60	55	50	40	20		
Trim 85	66	15	18	28	26	41						65	60
Tripe, fresh	82	10	9	100	0	0			20				
Veal													
Lean	69	10	19	27	26	30				10			
Pork													
Backfat	5	93	1	95	0	0					27		
Heart	73	10	15	27	6	32				8			
Jowl, skinned	24	71	5	43	5	2		45					
Skin	40	32	28	99	6	1					20		
Trim 80 (lean)	60	23	16	25	16	25					33		
Trim 50	36	52	10	34	12	9						35	
Trim Reg	34	58	8	36	10	8	40		30	30			40
Tripe	74	15	10	100	0	0				12			
Dry Ingredients													
Cereal flour	12	1	10	0	18	0				3.5			
Corn syrup solids	3.5	0	0	0	5	0							2.25
Dextrose	.06	0	0	0	10	0				1			1
Hydrolyzed Veg.													
Protein (HVP)	10	0	31	0	20	0						0.25	0.5
Non-fat dry milk	3	1	38	0	25	0						3.5	4
Salt	.01	0	0	0	40	0	3	2.5	3	3	2.5	2.6	4
Soy protein concentrate	8	0	75	0	45	0		4					2
Sugar (sucrose)	.06	0	0	0	10	0	0.5	2	0.5			1	
Moist Ingredients													
Corn syrup	20	0	0	0	5	0		2					
Water or ice	100	0	0	0	0	0	25	35	25	40	33	20	25
Calculated composition 10% shrink													
Moisture							*59.1	54.2	*64.2	*64.7	51.5	54.9	51.8
Fat							25.8	29.0	21.5	19.2	*33.9	24.4	25.8
Protein							12.1	11.6	11.4	10.7	12.1	14.5	13.8
Properties													
% Collagen (Max. 35)							29.8	24.6	*39.3	34.6	*55.1	26.9	24.3
Bind Points (Min. 1.8)							2.8	3.2	2.3	2.1	1.8	3.3	3.4
Color Points (Min. 2)							4.2	3.3	3.5	3.2	2.4	4.5	3.8

FRANKFURTER

Average Values

Section 12 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							BZ	CA	CB	CC	CD	CE	CF
Meat block													
Beef													
Trim 80	63	20	17	30	24	39	40	40					
Trim 75	58	25	16	38	22	34			80	70	70	70	60
Veal													
Lean	69	10	19	27	26	30	40	40					
Pork													
Backfat	5	93	1	95	0	0	20	20					
Trim 80 (lean)	60	23	16	25	16	25							20
Trim 50	36	52	10	34	12	9				30	30	30	
Trim Reg	34	58	8	36	10	8			20				20
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	3.5						3.5
Dextrose	.06	0	0	0	10	0				2			
Non-fat dry milk	3	1	38	0	25	0		3.5		3.5	3.5	3.5	
Salt	.01	0	0	0	40	0	3	3	3	2.6	2.6	2.6	3
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5	0.5		1		0.4
Moist Ingredients													
Corn syrup	20	0	0	0	5	0					2	2	
Water or ice	100	0	0	0	0	0	25	25	10	25	25	25	10
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0			0.06				0.06
Onion	89	0	1	0	0	0							0.5
Calculated composition 10% shrink													
Moisture							55.6	55.3	50.8	52.8	52.6	53.1	49.9
Fat							25.8	25.8	*30.9	27.7	27.5	27.7	29.5
Protein							12.6	13.4	14.1	13.0	12.9	13.0	14.0
Properties													
% Collagen (Max. 35)							28.6	26.9	*37.7	33.9	33.9	33.9	33.9
Bind Points (Min. 1.8)							3.1	3.3	2.9	2.6	2.6	2.6	2.7
Color Points (Min. 2)							4.2	4.2	4.4	3.4	3.4	3.4	4.0

FRANKFURTER

Average Values

Section 13 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							CG	CH	CI	CJ	CK	CL	CM
Meat block													
Beef													
Trim 75	58	25	16	38	22	34	60	60	43				
Trim 70	55	30	15	39	20	31				32			
Veal													
Lean	69	10	19	27	26	30				40	50	50	40
Pork													
Cheek meat	67	15	17	72	9	29							15
Liver	73	7	19	24	2	49				3			
Shoulder	58	27	14	25	18	15				25			
Trim 80 (lean)	60	23	16	25	16	25	20	20					
Trim 50	36	52	10	34	12	9			57				
Trim Reg	34	58	8	36	10	8	20	20			50	50	45
Dry Ingredients													
Cereal flour	12	1	10	0	18	0					3		
Corn syrup solids	3.5	0	0	0	5	0			2				
Dextrose	.06	0	0	0	10	0			1				0.9
Non-fat dry milk	3	1	38	0	25	0	3.5		3	3.5		3	5
Salt	.01	0	0	0	40	0	3	3	3.75	3	2.5	2.5	2.5
Soy flour	8	1	47	0	30	0				3.5			
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.4		0.5	0.5	0.5	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	10	29	20	30	30	25
Fruit & Vegetables													
Onion	89	0	1	0	0	0		0.5					
Calculated composition 10% shrink													
Moisture							49.4	51.4	48.6	58.9	*55.8	55.5	53.9
Fat							29.7	*30.4	*32.4	17.6	27.8	27.8	27.0
Protein							14.9	14.1	11.0	16.6	11.3	12.0	13.0
Properties													
% Collagen (Max. 35)							32.0	34.8	33.1	25.4	29.0	27.3	33.2
Bind Points (Min. 1.8)							3.0	2.7	2.0	3.8	2.4	2.6	2.5
Color Points (Min. 2)							4.0	4.1	2.3	3.9	2.6	2.6	2.8

FRANKFURTER

Average Values

Section 14 of 25

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							CN	CO	CP	CQ	CR	CS	CT
Meat block													
Veal													
Lean	69	10	19	27	26	30	40	13					
Pork													
Backfat	5	93	1	95	0	0		37					
Liver	73	7	19	24	2	49	3						
Trim 80 (lean)	60	23	16	25	16	25	25	50	75	60	60		
Trim 50	36	52	10	34	12	9		25	40				
Trim Reg	34	58	8	36	10	8	32				40	40	
Poultry													
Chicken													
Fat	5	95	1	95	0	0							26
Meat	57	25	17	18	23	19							63
Skin, cooked	22	15	60	99	6	0							11
Other Meats or Mixtures													
Cooking broth	99	0	1	0	0	5							11
Dry Ingredients													
Cereal flour	12	1	10	0	18	0		6			3		
Dextrose	.06	0	0	0	10	0		0.6					3
Non-fat dry milk	3	1	38	0	25	0	5		3.5	3.5		3	
Salt	.01	0	0	0	40	0	3	2.5	2.5	2.5	2.5	2.5	2.5
Semolina flour	12	1	10	0	18	0							11
Sugar (sucrose)	.06	0	0	0	10	0	0.5				0.5	0.5	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	25	18	25	20	20	20	12
Calculated composition 10% shrink													
Moisture							56.2	40.9	56.0	51.1	50.6	50.3	39.7
Fat							23.8	*41.3	25.7	*30.5	*32.7	*32.7	*33.6
Protein							13.8	10.0	13.4	13.2	11.6	12.3	15.0
Properties													
% Collagen (Max. 35)							24.7	26.4	24.4	25.1	27.0	25.5	*46.4
Bind Points (Min. 1.8)							2.8	1.8	2.2	2.1	*1.7	1.9	2.4
Color Points (Min. 2)							3.1	2.4	2.7	2.4	2.3	2.3	*1.6

FRANKFURTER

Average Values

Section 15 of 25

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	3	2	2	2	2	2	2	2
Spices											
Cardamon	8	3.5	9		1						
Cinnamon	10	3	4			1					
Coriander	5	18	15		1	2	2	2	2	2	2
Garlic, Powder	6	1	17			1					
Ginger	9	4	8.5				1	1			
Mace	8	30	7	1.5	1	2	1		2	1	
Nutmeg	8	33	7								2
Pepper, white	11	8.5	1.3	3.7	7	6	6	6	4	6	6
Sage	3	14	8.5			1					

FRANKFURTER

Average Values

Section 16 of 25

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14	15	16
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	2	2	2	2	2	2	2	1
Na Erythorbate	0.1	0	0								0.87
GDL	0	0	0								8
Spices											
Allspice	8.5	8.7	6								1
Cardamon	8	3.5	9								1
Coriander	5	18	15	2	1						1
Mace	8	30	7			2	2	2			
Mustard seed, ground	6	24	30		3	4	3				
Nutmeg	8	33	7	1	2				2		2
Onion powder	5	1	10			1	1				
Paprika	10	13	15			2			1	1	
Pepper, black	11	8.5	12				7				2
Pepper, white	11	8.5	1.3	6	6	7			6	6	

FRANKFURTER

Average Values

Section 17 of 25

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				17	18	19	20	21	22	23	24
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	1	0.75	0.5	0.5	0.5	0.5	0.5	0.5
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Allspice	8.5	8.7	6	1							
Cardamon	8	3.5	9	1		1					
Cinnamon	10	3	4				1				
Coriander	5	18	15	1	2	1	2	2	2	2	2
Garlic, Powder	6	1	17		0.75			0.5			
Ginger	9	4	8.5		1				1		
Mace	8	30	7			1	2			1	
Nutmeg	8	33	7	2				2			
Paprika	10	13	15					8			
Pepper, black	11	8.5	12	2							
Pepper, white	11	8.5	1.3		4.5	7	6	6	6	6	4
Sage	3	14	8.5				1				

FRANKFURTER

Average Values

Section 18 of 25

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				25	26	27	28	29	30	31	32
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na Erythorbate	0.1	0	0	0.87	0.87	0.87	0.87				
Spices											
Caraway	10	15	20					0.5			
Cardamon	8	3.5	9	0.5	0.5				1.4	0.1	
Celery, dry, ground	6	25	18								2
Cloves	7	22	6			1					
Coriander	5	18	15	3	3	2	1	3		5.4	1
Garlic, Powder	6	1	17						1.4		1
Ginger	9	4	8.5			1	1			0.2	
Mace	8	30	7				1	2			
Mustard, prepared	80	4	5	16							
Mustard seed, ground	6	24	30			15					8
Nutmeg	8	33	7	2	2	1				1.2	
Paprika	10	13	15	4	4	4				0.4	12
Pepper black	11	8.5	12								2
Pepper, white	11	8.5	1.3	5	5		6.5	7	4.3	0.8	2

FRANKFURTER

Average Values

Section 19 of 25

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				33	34	35	36	37	38	39	40
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.2
Na Erythorbate	0.1	0	0							0.87	0.87
Spices											
Allspice	8.5	8.7	6							1	
Cardamon	8	3.5	9								1
Celery, dry, ground	6	25	18	2							
Celery seed, ground	6	25	18							1	2
Coriander	5	18	15		3	2	2	2	2		
Garlic, Powder	6	1	17	1						0.5	0.5
Ginger	9	4	8.5			2	1.1				
Liquid smoke	80	0	0								4
Mace	8	30	7	1		2	1.1	1		1	
Mustard prepared											4
Mustard seed, ground	6	24	30	8	1						
Nutmeg	8	33	7		2				1		
Onion powder	5	1	10							0.5	1
Paprika	10	13	15	12							8
Pepper black	11	8.5	12	2							
Pepper, white	11	8.5	1.3	2	5	2	6.5	6	6	4	4

FRANKFURTER

Average Values

Section 20 of 25

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				41	42	43	44	45	46	47	48
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Na Erythorbate	0.1	0	0	0.87	0.87	0.87	0.87	0.87			
Spices											
Celery seed, ground	6	25	18	2	2	2					
Coriander	5	18	15				2	1	1.3		
Garlic, Powder	6	1	17	1	1		1	1			
Mace	8	30	7	1	1	1			2		
Mustard seed, ground	6	24	30	8	4		4	4			
Nutmeg	8	33	7				2				
Onion powder	5	1	10			2	2	1			
Paprika	10	13	15	12			8	8			
Pepper black	11	8.5	12	2						4	2.5
Pepper, white	11	8.5	1.3	2	4	4	5	4	4		

Average Values

Section 21 of 25

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				49							
Curing Ingredients											
Na or K Nitrate	0.1	0	0	2							
Spices											
Coriander	5	18	15	2							
Mace	8	30	7	2							
Pepper, white	11	8.5	1.3	6							

FRANKFURTER

Section 22 of 25

Processing Procedures

- A.
 - 1. Grind and regrind
 - 2. Mix
 - 3. Emulsify
 - 4. Stuff and link
 - 5. Cook and smoke to internal temperature of 152°F
 - 6. Shower, 15 min.
 - 7. Cooler, overnight
- B.
 - 1. Grind
 - 2. Mix
 - 3. Stuff and link
 - 4. Hold, 1 hour, room temp.
 - 5. Smoke and cook to 155°F internal temperature
 - 6. Shower, 10 min
 - 7. Chill
- C.
 - 1. Grind
 - 2. Mix
 - 3. Emulsify
 - 4. Stuff and link
 - 5. Smoke and cook to internal temperature of 150°F
 - 6. Shower, 5 min.
 - 7. Cooler
- D.
 - 1. Chop
 - 2. Stuff, link
 - 3. Smoke and cook to internal temperature of 160°F
 - 4. Shower, 10 min
 - 5. Cooler
- E.
 - 1. Grind
 - 2. Chop
 - 3. Stuff and link
 - 4. Smoke and cook
 - 5. Internal temperature of 148 to 163°F
 - 6. Chill, 85°F with shower
 - 7. Peel

FRANKFURTER

Section 23 of 25

Processing Procedures

F.

1. Grind
2. Chop
3. Mix
4. Stuff and link
5. Chill, 12 hours, cure
6. Smoke
7. Cook in 170°F water
8. Internal temperature of 155°F
9. Shower, 5 min.

G.

1. Cheese frank
2. Grind cheese, 1/8" plate
3. Add in last few revolutions of chopper

H.

1. Chop
2. Stuff, link
3. Hold, 18 hours, 38°F
4. Room temperature, 2 hrs
5. Smoke and cook

I.

1. Grind
2. Chop and mix to 58°F
3. Smoke and cook
4. Hot shower
5. Cold shower

J.

1. Fine grind
2. Mix
3. Stuff
4. Room temperature, 30 minutes to 1 hr
5. Dry smoke, 30 minutes
6. Heavy smoke, 1-1/2 hours
7. Cook to internal temperature of 138°F
8. Steam cook to 155°F internal temperature
9. Shower to 100°F internal temperature
10. Dry, room temperature
11. Chill to internal temperature of 50°F

K.

1. Fine grind
2. Mix
3. Stuff
4. Room temperature, 30 minutes to 1 hour

FRANKFURTER

Section 24 of 25

Processing Procedures

K. (cont)

5. Dry smoke, 30 minutes
6. Heavy smoke, 1-1/2 hour
7. Cook to internal temperature of 152°F
8. Shower to 100°F internal temperature
9. Dry, room temperature
10. Chill to internal temperature of 50°F

L.

1. Grind
2. Chop to 44°F
3. Add pork and chop to 60°F
4. Stuff
5. Smoke and cook to internal temperature of 155°F
6. Chill to 34°F
7. Peel
8. Pack

M.

1. Maximum chop temperature, 55°F
2. Max cook temperature of 150°F (internal)

N.

1. Grind beef
2. Mix
3. Grind pork
4. Chop, mix
5. Stuff
6. Smoke
7. Water cook to internal temperature of 145°F
8. Water cool to 90°F internal temperature
9. Chill, 38°F

Cooking Forms

Section 25 of 25

1. Artificial casing for skinless
2. Use 25 mm cellulose casing
3. Use 22 mm sheep casings
4. Hog casing
5. Use 25-28 mm casings

FRANKFURTER, CANNED

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Other Meats or Mixtures or Undesignated													
Bone	12	30	18	—	—	—	use						
Frankfurter	56	26	13	25	8	20	100						
Calculated composition	0% shrink												
Moisture							56.0						
Fat							26.0						
Protein							13.0						

Processing Procedures

Section 2 of 3

A.

1. Surround media (beef broth)
1 part protein: 135 parts water
Prepared by cooking bones

B.

1. Water pack

Cooking Form

Section 3 of 3

1. Cans

FRANKFURTER, CHILI

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Bull F.C.	70	10	20	20	30	47	60	60					
Chuck	66	16	18	30	24	38			60	60			
Pork													
Trim 80 (lean)	60	23	16	25	16	25	20	20	20	20			
Trim Reg	34	58	8	36	10	8	20	20	20	20			
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.5	2.5	2.5	2.5			
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5	0.5	0.5			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	10	10	10			
Fruit & Vegetables													
Pimiento, chopped	92	1	1	0	0	60	18.3		18.3				
Tomato, puree	87	0	2	0	0	70		9		9			
Calculated composition 12% shrink													
Moisture							62.2	59.6	60.1	57.4			
Fat							19.4	20.7	22.5	24.0			
Protein							14.7	15.8	13.7	14.7			
Properties													
% Collagen (Max. 35)							22.2	22.3	29.2	29.2			
Bind Points (Min. 1.8)							3.7	4.0	2.8	3.0			
Color Points (Min. 2)							5.8	6.2	4.5	4.8			

FRANKFURTER, CHILI

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Spices											
Chili pepper	8	17	12	28							
Cumin	8	22	18	1							
Nutmeg	8	33	7	3							
Oregano	7	10	11	4							
Paprika	10	13	15	12							

Processing Procedure

Section 3 of 4

A.

1. Chop
2. Stuff
3. Smoke, 30 minutes
4. Cook at 170°F

Cooking Forms

Section 4 of 4

1. Artificial casing for skinless
2. Use 25 mm cellulose casing
3. Use 22 mm sheep casings
4. Hog casing
5. Use 25-28 mm casings

FRISSES [Sopperes(s)ata]

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	33						
Pork													
Trim 80 (lean)	60	23	16	25	16	25	33						
Trim Reg	34	58	8	36	10	8	34						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.25						
Salt	.01	0	0	0	40	0	3.4						
Sugar (sucrose)	.06	0	0	0	10	0	0.25						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.06						
Calculated composition 30% shrink													
Moisture							30.2						
Fat							*44.8						
Protein							19.2						
Properties													
% Collagen (Max. 35)							29.2						
Bind Points (Min. 1.8)							3.5						
Color Points (Min. 2)							5.2						

FRISSES [Sopperes(s)ata]

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrate	0.1	0	0	3							
Spices											
Chili pepper	8	17	12	4							
Pepper, white	11	8.5	1.3	7							
Pimiento, powder	8	17	12	4							

Processing Procedure

Section 3 of 4

A.

1. Grind
2. Mix
3. Cure at 38°F
4. Stuff
5. Green room, 24 hours 55°F
6. Dry room, 60-90 days

Cooking Form

Section 4 of 4

1. Synthetic casing

GALICIAN (Galacian) SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	20	20					
Pork													
Check meat	67	15	17	72	9	29	20	20					
Trim 80 (lean)	60	23	16	25	16	25	50	50					
Trim Reg	34	58	8	36	10	8	10	10					
Dry Ingredients													
Corn flour	29	21	8	0	18	0	3.5						
Salt	.01	0	0	0	40	0	3	3					
Calculated composition 30% shrink													
Moisture							52.5	53.6					
Fat							25.3	25.4					
Protein							16.8	17.0					
Properties													
% Collagen (Max. 35)							*36.1	*36.9					
Bind Points (Min. 1.8)							2.7	2.7					
Color Points (Min. 2)							4.6	4.8					

GALICIAN (Galacian) SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	2							
Spices											
Coriander	5	18	15	2							
Garlic Powder	6	1	17	1							
Pepper, white	11	8.5	1.3	6							

Processing Procedure

Section 3 of 4

A.

1. Grind
2. Mix
3. Stuff
4. Hold, 18 hours, 40°F
5. Smoke and cook
6. Cool

Cooking Form

Section 4 of 4

1. Beef rounds

GARLIC, SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	50						
Cow F.C.	68	14	18	21	24	39		75	60				
Fat, cured	15	80	5	92	0	0				15			
Trim 75, cured	62	23	14	38	16	25				85			
Pork													
Backfat	5	93	1	95	0	0		10					
Ham fat, cured	15	81	4	93	0	0		15					
Heart	73	10	15	27	6	32			15				
Jowl, skinned	24	71	5	43	5	2			10				
Liver	73	7	19	24	2	49			15				
Trim 50	36	52	10	34	12	9	50						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	1	1	1	0.5			
Non-fat dry milk	3	1	38	0	25	0	4	4	4				
Salt	.01	0	0	0	40	0	3	2.5	3	2.5			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	25						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.12		0.12				
Calculated composition 7% shrink													
Moisture							55.6	46.4	57.4	49.8			
Fat							25.1	*32.0	18.0	*32.9			
Protein							13.3	15.7	17.8	13.2			
Properties													
% Collagen (Max. 35)							22.5	22.2	21.1	41.2			
Bind Points (Min. 1.8)							3.2	3.6	3.2	2.0			
Color Points (Min. 2)							4.2	5.3	6.3	3.1			

GARLIC, SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na Erythorbate	0.1	0	0	0.87							
Spices											
Cardamon	8	3.5	9	0.5							
Coriander	5	18	15	3	1						
Garlic, Powder	6	1	17	2							
Ginger	9	4	8.5		1						
Mace	8	30	7		1.5						
Mustard seed, ground	6	24	30	16							
Nutmeg	8	33	7	2							
Paprika	10	13	15	4							
Pepper, white	11	8.5	1.3	5	6						

Processing Procedures

Section 3 of 4

A.

1. Internal temperature of 155°F

B.

1. Grind
2. Mix
3. Stuff
4. Smoke, 2 hours
5. Cook at 165°F
6. Shower

Cooking Form

Section 4 of 4

1. Artificial casing

GELATIN, SOLUTION

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Dry Ingredients													
Gelatin	13	0	85	0	20	0	1	1					
Salt	.01	0	0	0	40	0	.06						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	6	8					
Calculated composition	0% shrink												
Moisture							*86.8	*90.3					
Fat							0	0					
Protein							12.0	9.4					
Properties													
% Collagen (Max. 35)							0	0					
Bind Points (Min. 1.8)							2.4	1.9					
Color Points (Min. 2)							*0	*0					

Average Values

Section 2 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 10 lbs. of gelatin mix							
				1	2	3	4	5	6	7	8
Spices											
Vinegar, 90 grain	94	0	0	16							

Cooking Form

Section 3 of 3

1. Vat

GLAZE FOR BAKED HAM

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A	B	C	D	E	F
Dry Ingredients												
Corn syrup solids	3.5	0	0	0	5	0	50					
Dextrose	.06	0	0	0	10	0		0.75	0.75	0.75	0.75	
Gelatin	13	0	85	0	20	0	4					
Sugar, brown	2	0	0	0	0	0		7.25	7.25			
Sugar (sucrose)	.06	0	0	0	10	0	2			7.25	7.25	
Moist Ingredients												
Corn syrup	20	0	0	0	5	0	50					
Water or ice	100	0	0	0	0	0	20					
Fruit & Vegetables												
Apricot pulp, cooked	89	0	1	0	0	5		2		2		
Peach pulp, cooked	91	0	1	0	0	2			2		2	
Pineapple, slices	84	0	0	0	0	0		use				
Pineapple juice	86	0	0	0	0	0	4			4		
Pineapple preserves	29	0	1	0	0	0						use
Calculated composition 0% shrink												
Moisture							*32.1	*19.3	*19.7	*37.3	*18.2	*29.0
Fat							0	0	0	0	0	0
Protein							4.3	0.2	0.2	0.1	0.2	1.0

GLAZE FOR BAKED HAM

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per glaze mixture							
				1	2	3	4	5	6	7	8
Spices											
Horseradish	87	0	1	use							
Mace	8	30	7		use						
Mustard, prepared	80	4	5	use							
Nutmeg	8	33	7		use						
Paprika	10	13	15	0.5	0.5	0.5					

Processing Procedures

Section 3 of 4

- A.
1. Mix
 2. Add water or pineapple juice to moisten
 3. Hold, 24 hours
 4. Apply 4 ounce/ham
 5. Sprinkle with mace or nutmeg
 6. Sprinkle with granulated sugar
 7. Bake ham at 400°F to internal temperature of 170°F
- B.
1. Cook to 240°F
 2. Cool to 120°F
 3. Dip cooked hams
 4. Apply pineapple slices
 5. Stuff
- C.
1. Use glaze for last 1/2 hr of baking

Cooking Form

Section 4 of 4

1. Kettle

GOTEBORG

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	80	75	35				
Cheek meat	70	20	18	59	14	48			20	20			
Cow F.C.	68	14	18	21	24	39			35	80	75	40	
Heart	70	13	17	27	6	40			20	20			
Pork													
Backfat	5	93	1	95	0	0	20				20		
Cheek meat	67	15	17	72	9	29							27
Trim 80 (lean)	60	23	16	25	16	25							33
Trim Reg	34	58	8	36	10	8		25	25	25		25	
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	3.5		3.5	3.5		3.5	
Dextrose	.06	0	0	0	10	0	0.5	0.5	0.5	0.5	0.5	0.5	0.4
Non-fat dry milk	3	1	38	0	25	0		3.5			3.5		
Salt	.01	0	0	0	40	0	2.75	2.75	2.75	2.75	2.75	2.75	3.4
Sugar (sucrose)	.06	0	0	0	10	0							0.4
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	15	10	10	10	15	
Calculated composition 10% shrink													
Moisture							53.1	58.3	56.9	56.2	51.2	57.3	58.3
Fat							25.3	20.1	23.4	24.8	28.4	22.8	18.4
Protein							15.6	16.7	15.6	14.9	15.2	14.7	18.2
Properties													
% Collagen (Max. 35)							20.7	20.3	31.5	32.5	20.1	22.1	*36.0
Bind Points (Min. 1.8)							4.6	4.6	2.9	2.4	3.6	3.2	3.2
Color Points (Min. 2)							7.2	6.6	6.2	5.4	5.3	5.0	5.8

GOTEBORG

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H						
Beef													
Trim 90 (lean)	71	11	18	28	27	43	40						
Pork													
Cheek meat	67	15	17	72	9	29	27						
Trim 80 (lean)	60	23	16	25	16	25	33						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.5						
Salt	.01	0	0	0	40	0	3.4						
Calculated composition 10% shrink													
Moisture							59.8						
Fat							17.2						
Protein							18.3						
Properties													
% Collagen (Max. 35)							*38.8						
Bind Points (Min. 1.8)							3.4						
Color Points (Min. 2)							6.1						

GOTEBORG

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0			3					
Spices											
Cardamon	8	3.5	9			1					
Coriander	5	18	15			1					
Garlic, Powder	6	1	17	0.5							
Mustard seed, ground	6	24	30	5	5						
Nutmeg	8	33	7	2	2						
Pepper black	11	8.5	12	5	5						
Pepper, white	11	8.5	1.3			8					

GOTEBORG

Section 4 of 5

Processing Procedures

A.

1. Grind
2. Mix
3. Cure, 38°F
4. Remix
5. Stuff
6. Green room, 38°F, 24 hours
7. Heavy smoke
8. Dry room

B.

1. Grind
2. Mix
3. Cure, 38°F, 12 hours
4. Regrind
5. Stuff
6. Room temperature, 4 hrs
7. Smoke, 130°F, 3 hours
8. Cook to internal temperature of 145°F
9. Shower to internal temperature of 120°F
10. Room temperature, 2 hour
11. Chill to 45°F

C.

1. Grind
2. Mix
3. Cure, 38°F, 12 hours
4. Regrind
5. Stuff
6. Room temperature, 3 hours
7. Smoke, 130°F, 4 hours
8. Steam to 145°F, internal temperature
9. Shower to 120°F, internal temperature
10. Room temperature, 2 hours
11. Chill to 45°F, internal temperature

Cooking Forms

Section 5 of 5

1. Artificial casing
2. Beef casing

GOTHAER

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	20						
Pork													
Trim Reg	34	58	8	36	10	8	80						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.4						
Salt	.01	0	0	0	40	0	3						
Sugar (sucrose)	.06	0	0	0	10	0	0.4						
Calculated composition 10% shrink													
Moisture							33.2						
Fat							*52.0						
Protein							10.7						
Properties													
% Collagen (Max. 35)							33.1						
Bind Points (Min. 1.8)							*1.7						
Color Points (Min. 2)							2.2						

GOTHAER

Average Values

Section 2 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrate	0.1	0	0	3							
Spices											
Pepper, white	11	8.5	1.3	8							

Cooking Forms

Section 3 of 3

1. Pork casing
2. Artificial casing

GOULASH, HUNGARIAN

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
							A	B	C	D				
Meat block														
Beef														
Trim 80	63	20	17	30	24	39	100	100						
Veal														
Lean	69	10	19	27	26	30			100	100				
Dry Ingredients														
Cereal flour	12	1	10	0	18	0	5	5	5	5				
Gelatin	13	0	85	0	20	0	2.5		2.5					
Salt	.01	0	0	0	40	0	2.3	2.3	2.25	2.25				
Fruit & Vegetables														
Catsup	69	1	2	0	0	80	4	4	4	4				
Onion	89	0	1	0	0	0	5	5	6	6				
Tomato puree	87	0	2	0	0	70	6	6	6	6				
Calculated composition 6% shrink														
Moisture							58.7	59.8	63.9	65.2				
Fat							17.1	17.5	8.5	8.7				
Protein							16.9	15.4	18.5	22.2				
Properties														
% Collagen (Max. 35)							25.7	28.8	23.4	19.9				
Bind Points (Min. 1.8)							3.9	3.6	4.6	4.3				
Color Points (Min. 2)							5.8	5.9	4.9	5.0				

GOULASH, HUNGARIAN

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Caraway seed, ground	10	15	20	3							
Celery seed, ground	6	25	18	5							
Coriander	5	18	15	3							
Paprika	10	13	15	20							
Pepper, red	8	17	12	0.25							

Processing Procedure

Section 3 of 4

A.

1. Grind
2. Cook, well done
3. Cool
4. Stuff
5. Ice water dip
6. Cool
7. Dissolve, 1 lbs in 1-1/2 cups of water and serve

Cooking Form

Section 4 of 4

1. Vat

GROUND MEAT AND GROUND MEAT WITH VEGETABLE PROTEIN

Average Values

Section 1 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	40	40	40				
Cow F.C.	68	14	18	21	24	39				55	55		
Fat	5	94	1	95	0	0						38	13
Flank	43	42	13	24	12	20	60	60	60	45	45		
Trim 90 (lean)	71	11	18	28	27	43						62	87
Dry Ingredients													
Rusk	5	9	14	0	16	0						3.7	
Salt	.01	0	0	0	40	0	1.2	1.2	1.2	0.7	0.7	1.5	1.5
Soy protein concentrate	8	0	75	0	45	0						3.7	
Textured veg. protein	8	1	50	0	35	0				21	14		
Whey	4.5	1	13	0	20	0	1.8	1.8	1.8				
Moist Ingredients													
Textured Veg. Protein, hydrated	74	0	14	0	10	0	14	8.5	4.6				
Water or ice	100	0	0	0	0	0	30	19	11	20	27	15	22
Calculated composition 0% shrink													
Moisture							*63.0	59.4	56.2	55.3	59.9	*49.6	*68.4
Fat							21.5	24.2	26.7	18.9	18.9	*34.6	17.6
Protein							11.7	12.6	13.4	18.5	16.1	12.0	12.8
Properties													
% Collagen (Max. 35)							23.6	24.7	25.5	13.3	15.3	21.1	27.8
Bind Points (Min. 1.8)							2.0	2.2	2.3	4.8	3.9	3.5	3.4
Color Points (Min. 2)							2.9	3.3	3.6	3.6	3.6	3.9	5.5

GROUND MEAT AND GROUND MEAT WITH VEGETABLE PROTEIN

Average Values

Section 2 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Flank	43	42	13	24	12	20	29						
Plate	41	40	18	42	16	25		82					
Trim 90 (lean)	71	11	18	28	27	43		18	83	83			
Trim 85	66	15	18	28	26	41	71				50		
Trim 75	58	25	16	38	22	34						100	100
Trim 50	38	50	11	42	12	19					50		
Pork													
Backfat	5	93	1	95	0	0			16		16		
Dry Ingredients													
MSG	0	0	0	0	0	0					0.4	0.5	
Non-fat dry milk	3	1	38	0	25	0				1.2			
Plant protein													
hydrolysate	8	0	30	0	20	0					0.2		
Salt	.01	0	0	0	40	0	1	0.7	1.5	1.5			0.1
Soy protein concentrate	8	0	75	0	45	0			1.2				
Textured veg. protein	8	1	50	0	35	0	42	41			4	5	4
Moist Ingredients													
Water or ice	100	0	0	0	0	0	80	90	22	22	13	15	7
Calculated composition 0% shrink													
Moisture							64.0	60.3	*66.1	*66.1	55.6	60.9	58.8
Fat							10.4	15.2	19.4	19.4	27.7	20.8	22.5
Protein							16.8	16.6	12.7	12.6	14.1	15.4	16.2
Properties													
% Collagen (Max. 35)							11.9	18.5	27.1	27.9	29.1	32.8	33.8
Bind Points (Min. 1.8)							5.0	4.5	3.6	3.4	3.2	3.6	3.8
Color Points (Min. 2)							2.7	2.2	5.2	5.2	4.0	4.5	4.9

GROUND MEAT AND GROUND MEAT WITH VEGETABLE PROTEIN

Average Values

Section 3 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	Q	R	S	T	U
Meat block													
Beef													
Trim 75	58	25	16	38	22	34	100	100	100				
Trim 70	55	30	15	39	20	31				100	100	100	
Trim 65	50	35	14	39	18	28							100
Dry Ingredients													
MSG	0	0	0	0	0	0				0.4			
Peanut grit	5	48	26	0	18	0							17
Plant protein													
hydrolysate	8	0	30	0	20	0				0.2			
Salt	.01	0	0	0	40	0	0.1			1	1	0.8	1.7
Textured veg. protein	8	1	50	0	35	0		4.8	4				
Moist Ingredients													
Textured Veg. Protein,													
hydrated	74	0	14	0	10	0	5.2			17	15	42	
Water or ice	100	0	0	0	0	0	9	14	12	25	27	50	45
Calculated composition 0% shrink													
Moisture							62.0	60.9	60.6	*64.5	*65.1	*70.6	*58.6
Fat							21.9	21.1	21.6	20.9	21.0	15.6	26.4
Protein							14.6	15.5	15.5	12.1	12.0	10.8	11.3
Properties													
% Collagen (Max. 35)							*36.4	33.0	33.8	33.7	34.1	28.1	29.5
Bind Points (Min. 1.8)							3.1	3.7	3.6	2.3	2.2	1.9	2.0
Color Points (Min. 2)							4.8	4.6	4.7	3.2	3.3	2.4	2.4

GROUND MEAT AND GROUND MEAT WITH VEGETABLE PROTEIN

Average Values

Section 4 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							V	W	X	Y	Z	AA
Meat block												
Beef												
Trim 65	50	35	14	39	18	28	100					
Pork												
Trim 80 (lean)	60	23	16	25	16	25		50				
Trim Reg	34	58	8	36	10	8		50				
Poultry												
Chicken												
Meat	57	25	17	18	23	19			100	90		
Skin, cooked	22	15	60	99	6	0				10		
Turkey												
Meat	68	7	24	18	23	19					100	90
Skin, cooked	22	15	60	99	6	0						10
Dry Ingredients												
Bread crumb	7	5	13	0	15	0			2		2	
Peanut	5	48	26	0	18	0	10					
Salt	.01	0	0	0	40	0	1.7	2		1.4		1.4
Soy protein concentrate	8	0	75	0	45	0			6		6	
Textured veg. protein	8	1	50	0	35	0		7				
Wheat, fines	12	2	12	0	18	0	7					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	45	18	12	3	12	3
Calculated composition 0% shrink												
Moisture							*58.9	51.6	58.0	54.1	67.2	63.6
Fat							24.4	*31.9	20.9	23.0	5.9	7.5
Protein							10.7	12.2	18.1	20.4	24.0	26.4
Properties												
% Collagen (Max. 35)							31.2	22.2	14.1	*40.8	15.0	*35.7
Bind Points (Min. 1.8)							1.9	2.3	5.0	3.7	6.3	5.1
Color Points (Min. 2)							2.4	1.8	2.7	2.8	3.8	3.9

GROUND MEAT AND GROUND MEAT WITH VEGETABLE PROTEIN

Average Values

Section 5 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients				NONE							
Spices				NONE							
Celery seed	6	25	18		0.5	0.1					
Chili pepper	8	17	12		0.3		3				
Garlic, Powder	6	1	17			0.1	0.1				
Mustard seed, ground	6	24	30				0.2				
Onion powder	5	1	10		0.6	0.6	0.5	6			
Pepper black	11	8.5	12			0.4	0.3	1			
Pepper, white	11	8.5	1.3						6		

Processing Procedure

Section 6 of 7

A.

1. Rehydrate soy, 40°F, 15 Minutes
2. Mix with meat
3. Grind, 1/2"
4. Mix

Cooking Form

Section 7 of 7

1. Patties

HAM AND EGG JELLIED SALAD

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Ham, deviled	51	32	14	30	6	20	45						
Dry Ingredients													
Gelatin	13	0	85	0	20	0	5.3						
Salt	.01	0	0	0	40	0	0.6						
Moist Ingredients													
Egg, hard cooked	74	12	13	0	0	1	55						
Water, hot	100	0	0	0	0	0	80						
Water or ice	100	0	0	0	0	0	40						
Worcestershire sauce	62	1	6	0	0	90	1.25						
Fruit & Vegetables													
Catsup	69	1	2	0	0	80	20						
Celery, sliced	94	0	1	0	0	0	20						
Onion	89	0	1	0	0	0	20						
Pickle, liquid	0	0	0	0	0	0	11						
Pickle, sweet	61	1	1	0	0	0	20						
Calculated composition 6% shrink													
Moisture							*76.4						
Fat							7.2						
Protein							6.4						
Properties													
% Collagen (Max. 35)							9.9						
Bind Points (Min. 1.8)							*0.4						
Color Points (Min. 2)							*0.6						

HAM AND EGG JELLIED SALAD

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of ham and eggs							
				1	2	3	4	5	6	7	8
Spices											
Pepper black	11	8.5	12	2.5							

Processing Procedure

Section 3 of 4

A.

1. Soften gelatin in cold water
2. Dissolve in hot water
3. Add catsup and Worcestershire to 60 pound gelatin mix
4. Pour into molds
5. Chill to set
6. Combine rest of ingredients with rest of gelatin
7. Pour over catsup - gelatin layer
8. Chill, till set
9. Unmold on salad greens

Cooking Form

Section 4 of 4

1. Mold

HAM AND EGG LOAF

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Other Meats or Mixtures or Undesignated													
Salami meat, cooked	56	30	12	31	8	20	100						
Dry Ingredients													
Salt	.01	0	0	0	40	0	3						
Sugar (sucrose)	.06	0	0	0	10	0	0.5						
Moist Ingredients													
Egg white, cooked cubed	86	0	10	0	0	0	10						
Calculated composition 6% shrink													
Moisture							54.2						
Fat							28.1						
Protein							12.2						
Properties													
% Collagen (Max. 35)							28.6						
Bind Points (Min. 1.8)							*0.9						
Color Points (Min. 2)							2.2						

HAM AND EGG LOAF

Average Values

Section 2 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	0.5							
Spices											
Pepper, white	11	8.5	1.3	6							

Cooking Form

Section 3 of 3

1. Loaf pan

HAM AND TONGUE SPREAD

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Ham fat, cured	15	81	4	93	0	0	11						
Ham, smoked	71	7	20	24	15	18	64						
Tongue	63	19	17	66	8	36	25						
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	30						
Dry Ingredients													
Mustard, heat treated	6	25	31	0	16	5	0.5						
Salt	.01	0	0	0	40	0	0.75						
Moist Ingredients													
Butter	15	81	1	0	0	1	1						
Calculated composition 0% shrink													
Moisture							*70.1						
Fat							14.4						
Protein							13.6						
Properties													
% Collagen (Max. 35)							35.0						
Bind Points (Min. 1.8)							*1.7						
Color Points (Min. 2)							2.9						

HAM AND TONGUE SPREAD

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Pepper, red	8	17	12	0.5							
Pepper, white	11	8.5	1.3	2.5							

Processing Procedure

Section 3 of 4

A.

1. Cure and cook (200°F) tongues in

40 pounds water

8 pounds salt

1.6 ounce sodium nitrite

2. Drain

3. Grind meat, 1/8"

4. Chop with seasoning and broth

5. Reheat

6. Fill cans

Cooking Form

Section 4 of 4

1. Cans, 3 oz.

HAM, BOILED

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Ham, fresh	71	7	20	24	18	21	100						
Dry Ingredients													
Salt	.01	0	0	0	40	0	3						
Sugar (sucrose)	.06	0	0	0	10	0	1						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10						
Calculated composition 10% shrink													
Moisture							67.8						
Fat							6.8						
Protein							19.5						
Properties													
% Collagen (Max. 35)							24.0						
Bind Points (Min. 1.8)							3.5						
Color Points (Min. 2)							4.1						

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							

HAM, BOILED

Processing Procedures

Section 3 of 5

- A.
1. Cure, hams
 2. Bone
 3. Place in lined molds, put lids on tightly
 4. Cook in 160°F water to an internal temperature of 155°F
(30 minute/pound)
 5. Water chill, 1 hour
 6. Tighten lids
 7. Chill at 40°F, 18 hrs
 8. Remove from molds
 9. Light smoke, 120°F, 1-1/2 hour
 10. Wash
 11. Stuff
- B.
1. Cure hams
 2. Bone
 3. Place in lined molds
 4. Cook, 160°F water to internal temperature of 155°F
(30 minute/pound)
 5. Water chill, 1 hour
 6. Tighten lids
 7. Chill at 40°F, 18 hours
 8. Remove from molds and wash
 9. Stuff
 10. Light smoke, 120°F, 1-1/2 hours
- C.
1. Cure
 2. Bone
 3. Wrap in paper, stockinette
 4. Place in retainer and press
 5. Steam cook 45 minute/pound to 155°F internal temperature
 6. Cool in water
 7. Chill

HAM, BOILED

Section 4 of 5

Processing Procedures

D.

1. Water cook

<u>Start temperature</u>	<u>Cook temperature</u>	<u>minute/pound</u>	<u>Internal temperature</u>
180°F	170°F	24	148-155°F
190°F	165°F	28	148-155°F
200°F	160°F	30	148-155°F

2. Cool in water

3. Chill

E.

1. Optional
2. Smoke before or after cooking

F.

1. Deep fat fry after cooking
2. Appearance of baked ham

G.

1. Baked appearance
2. Placed in sugar syrup or glaze
3. Optional, corn meal on surface
4. Bake, 1-1-3/4 hours at 250°F

Cooking Form

Section 5 of 5

1. Artificial casing

HAM, BRINE AND DRY CURE OR BRINE CURE, SMOKED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Ham, fresh	71	7	20	24	18	21	100						
Dry Ingredients													
Salt	.01	0	0	0	40	0	8.5						
Sugar (sucrose)	.06	0	0	0	10	0	1.5						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	45						
Calculated composition 10% shrink													
% Pump							10						
Moisture							68.6						
Fat							7.1						
Protein							20.2						
Properties													
% Collagen (Max. 35)							24.0						
Bind Points (Min. 1.8)							3.6						
Color Points (Min. 2)							4.2						

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 55 lbs. of brine							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	1.5							

HAM, BRINE AND DRY CURE OR BRINE CURE, SMOKED

Processing Procedures

Section 3 of 4

A.

1. Chill hams, 38°F
2. Mix dry ingredients and water
3. Pump hams, 10%
4. Rub, 5 pounds of dry ingredients mix on hams
5. Cure, 60 days at 38°F
6. Shower
7. Stockinette

Dry, 120°F, damper open, 12 hours

smoke, 140°F, damper 1/2 open, 18 hours

Cook, 165°F, damper closed, to internal temperature of 142°F

8. If fully cooked, cook to internal temperature of 155°F

B.

1. Chill hams to 38°F
2. Mix, dry ingredients in water
3. Pump hams, 10%
4. Place in vat and cover with brine
5. Cure, 38°F, 6 days
6. Shower
7. Stockinette
8. Smokehouse, 120°F, damper open, 12 hour
9. Smokehouse, 140°F, damper 1/2 open, 8 hours, smoke
10. Smokehouse, 165°F, damper closed, to internal temperature of 142°F
11. If fully cooked, cook to internal temperature of 155°F

Cooking Form

Section 4 of 4

1. Stockinette

HAM, BRINE OR DRY CURE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Ham, fresh	71	7	20	24	18	21	100	100					
Dry Ingredients													
Salt	.01	0	0	0	40	0	8.75	5.1					
Sugar (sucrose)	.06	0	0	0	10	0	1.5	0.9					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	47						
Calculated composition 10% shrink													
% Pump							8	DRY					
Moisture							70.8	63.3					
Fat							6.9	7.3					
Protein							19.6	21.0					
Properties													
% Collagen (Max. 35)							19.9	23.9					
Bind Points (Min. 1.8)							2.9	3.8					
Color Points (Min. 2)							3.4	4.4					

HAM, BRINE OR DRY CURE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per brine or 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Cure Type				BRINE	DRY						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	1.75	0.25						
Na or K Nitrate	0.1	0	0		1						

Processing Procedure

Section 3 of 4

A. Dry Cure

1. 2 days / lb.
2. Overhall 3 times (1/3 of cure each time)

B. Pump 10% brine

1. Pump
2. Cure for 4 days in cooler
3. Light smoke, cook to internal temperature of 122°F

C.

1. Mix brine and pump, 8%
2. Add, dry mix
3. Cure, 15 days, 38°F
4. Rework, 7 day, dry mix
5. Shower
6. Dry
7. Light smoke, cook to internal temperature of 122°F, 48 hrs.

Cooking Forms

Section 4 of 4

1. Hang
2. Stockinette

HAM, CANNED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Ham, fresh	71	7	20	24	18	21	100						
Dry Ingredients													
Salt	.01	0	0	0	40	0	3						
Sugar (sucrose)	.06	0	0	0	10	0	0.5						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10						
Calculated composition 8% gain in weight													
Moisture							73.5						
Fat							5.7						
Protein							16.3						
Properties													
% Collagen (Max. 35)							24.0						
Bind Points (Min. 1.8)							2.9						
Color Points (Min. 2)							3.4						

HAM, CANNED

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	1							

Processing Procedures

Section 3 of 4

A.

1. Curing solution (arterially injected)

81.77% water
15% salt
3% sugar
0.06% Na Nitrate
0.17% Na Nitrite

B.

1. Cover pickle (3 days)

89.88% water
10% salt
0.12% Na Nitrite

C.

1. Bone, fat and skin removed
2. Can and vacuum seal
3. Cook in 165°F water

Cooking Form

Section 4 of 4

1. Can

HAM, DEWEY

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Loin, meat	57	25	17	23	16	25	100						
Dry Ingredients													
Gelatin	13	0	85	0	20	0	3						
Salt	.01	0	0	0	40	0	3						
Sugar (sucrose)	.06	0	0	0	10	0	1						
Calculated composition 6% shrink													
Moisture							50.7						
Fat							24.9						
Protein							19.4						

HAM, DEWEY

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrate	0.1	0	0	1							

Processing Procedure

Section 3 of 4

A.

1. Cure, 2 loins
2. Soak, 2 hours
3. Sprinkle, dry gelatin
4. Place in mold, lean side together, press
5. Cook at 160°F, internal temperature of 150°F
6. Chill in water, 2 hours
7. Tighten press
8. Chill, 18 hours
9. Wash
10. Stuff

Cooking Form

Section 4 of 4

1. Mold

HAM, LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A	B	C	D	E	
Veal												
Lean	69	10	19	27	26	30	33	20				
Pork												
Ham, cured	71	7	20	24	15	18	67	60	100	100	100	
Trim Reg	34	58	8	36	10	8		20				
Dry Ingredients												
Bread crumb	7	5	13	0	15	0	8	10	8	5		
Gelatin	13	0	85	0	20	0					2	
Non-fat dry milk	3	1	38	0	25	0	6			8		
Salt	.01	0	0	0	40	0	0.2	2	0.2	0.8		
Sugar, brown	2	0	0	0	0	0					0.5	
Moist Ingredients												
Egg	74	12	13	0	0	1	8	12				
Water or ice	100	0	0	0	0	0	20			22		
Fruit & Vegetables												
Onion	89	0	1	0	0	0	2	6	3	2		
Parsley, chopped	85	1	4	0	0	0			3			
Tomato juice	94	0	1	0	0	40			20			
Tomato paste	75	1	3	0	0	90		6				
Calculated composition 5% shrink												
Moisture							66.8	58.7	69.7	67.6	67.9	
Fat							6.9	15.3	5.8	5.6	7.2	
Protein							17.6	15.9	16.8	18.1	22.3	
Properties												
% Collagen (Max. 35)							20.4	21.8	22.4	20.3	22.1	
Bind Points (Min. 1.8)							3.2	2.4	2.5	2.9	3.4	
Color Points (Min. 2)							3.1	2.8	2.9	2.7	3.7	

HAM, LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Celery seed	6	25	18	2							
Mustard seed, ground	6	24	30		1						
Pepper black	11	8.5	12	8	1	0.6					

Processing Procedures

Section 3 of 4

A.

1. Cube ham
2. Mix
3. Mold

B.

1. Grind, 1/8"
2. Mix
3. Sell fresh or frozen

Cooking Form

Section 4 of 4

1. Pans

HAM, MINCED OR CHOPPED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	40						
Trim 90 (lean)	71	11	18	28	27	43		25					
Pork													
Cheek meat	67	15	17	72	9	29		20					
Ham, fresh	71	7	20	24	18	21			100				
Ham, trim	70	9	19	27	17	20				100			
Heart	73	10	15	27	6	32		20					
Tongue	63	19	17	66	8	36		15					
Trim 80 (lean)	60	23	16	25	16	25	20						
Trim Reg	34	58	8	36	10	8	40	20					
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0	4.75						
Salt	.01	0	0	0	40	0	2.75	3.5	3.5	3.5			
Sugar (sucrose)	.06	0	0	0	10	0		1	1	0.4			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	6	25					
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.06		0.06				
Onion	89	0	1	0	0	0	1		1				
Calculated composition 6% shrink													
Moisture							48.5	*65.1	66.1	65.3			
Fat							*31.8	18.2	7.1	9.2			
Protein							14.3	12.4	20.2	19.5			
Properties													
% Collagen (Max. 35)							26.7	*44.9	23.9	26.9			
Bind Points (Min. 1.8)							2.8	*1.7	3.6	3.3			
Color Points (Min. 2)							3.5	4.0	4.2	3.9			

HAM, MINCED OR CHOPPED

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrate	0.1	0	0	1	1	1	1				
Na Ascorbate	0.1	0	0	0.87							
Na Erythorbate	0.1	0	0		0.87	0.87	0.87				
Spices											
Allspice	8.5	8.7	6		0.5	0.5					
Bay leaves	5	8	8		0.5						
Caraway	10	15	20			0.2					
Cardamon	8	3.5	9				2				
Cassia	10	7	4		0.5						
Cloves	7	22	6		0.5						
Coriander	5	18	15	2							
Ginger	9	4	8.5			0.5					
Maple flavor	35	0	0	2							
Nutmeg	8	33	7			1					
Pepper black	11	8.5	12			2.5					
Pepper, red	8	17	12		2						
Pepper, white	11	8.5	1.3	6			4				

HAM, MINCED OR CHOPPED

Section 3 of 4

Processing Procedures

- A.
 - 1. Cure ham
 - 2. Grind
 - 3. Mix
 - 4. Stuff
 - 5. Smoke, 3 hours, 110 to 135°F
 - 6. Cook at 155°F to internal temperature of 148°F
 - 7. Cold shower, 3 minutes
 - 8. Room temperature, 2 hours
 - 9. Chill, 45°F
- B.
 - 1. Chill meat, 34°F
 - 2. Shank, grind, 1/8"
 - 3. Grind remaining, 3/16"
 - 4. Mix
 - 5. Cure, 18 hours, 34°F
 - 6. Mix
 - 7. Fill can
 - 8. Vacuum seal
 - 9. Retort
- C.
 - 1. Chill meat, 32°F
 - 2. Grind beef, 1/8"
 - 3. Chop
 - 4. Grind pork, 1/8"
 - 5. Mix
 - 6. Cure, 16 hour, 34°F
 - 7. Mix
 - 8. Stuff in can
 - 9. Vacuum
 - 10. Water cook, internal temperature of 155°F
 - 11. Chill, perishable

Cooking Forms

Section 4 of 4

- 1. Can
- 2. Beef bung
- 3. Cellulose casing
- 4. Fibrous casing

HAM SPREAD

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Ham, smoked, cooked	71	7	20	24	15	18	100						
Fruit & Vegetables													
Pickle, sweet	61	1	1	0	0	0	10						
Pimiento	92	1	1	0	0	60	10						
Calculated composition 1% shrink													
Moisture							71.6						
Fat							6.1						
Protein							17.0						
Properties													
% Collagen (Max. 35)							23.8						
Bind Points (Min. 1.8)							2.5						
Color Points (Min. 2)							3.1						

HAM SPREAD

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients				NONE							
Spices				NONE							

Processing Procedure

Section 3 of 4

A.

1. Grind, 3/16" plate
2. Mix 10 minutes

Cooking Form

Section 4 of 4

1. Pan

HAM, WESTPHALIAN

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Ham, fresh	71	7	20	24	18	21	100						
Dry Ingredients													
Salt	.01	0	0	0	40	0	4						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20						
Calculated composition 5% shrink													
Moisture							72.0						
Fat							5.9						
Protein							17.0						
Properties													
% Collagen (Max. 35)							24.0						
Bind Points (Min. 1.8)							3.1						
Color Points (Min. 2)							3.6						

HAM, WESTPHALIAN

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrate	0.1	0	0	1							

Processing Procedure

Section 3 of 4

A.

1. Hams rubbed with salt and saltpeter
2. Place in vat
3. Cover with brine
4. Cure, 4 weeks
5. Air dry, 4 days
6. Smoke with hard wood and juniper
7. Smoke, light and intermediate, 7 days

Cooking Form

Section 4 of 4

1. Hang

HEAD CHEESE (Brawn)

Average Values

Section 1 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Cheek meat	70	20	18	59	14	48	10						
Heart	70	13	17	27	6	40	10						
Pork													
Cheek meat	67	15	17	72	9	29		22	20	20	15	15	
Cheek meat, cured	67	15	17	72	7	25							40
Ears	68	17	13	99	1	1					10		
Head, whole, meat	62	17	17	80	5	20	55						
Heart	73	10	15	27	6	32		17	20	10	20	20	
Lips	71	14	15	90	1	1					20		
Liver	73	7	19	24	2	49	5						
Skin	40	32	28	99	6	1	10		10	10	15		16
Snout	45	40	14	80	2	1			40	40			
Snout, pickled	45	40	14	80	2	1		45			20	40	44
Tongue	63	19	17	66	8	36		17	10	20		25	
Trim 80 (lean)	60	23	16	25	16	25	10						
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5					45		
Dry Ingredients													
Dextrose	.06	0	0	0	10	0		1	1	1			
Gelatin	13	0	85	0	20	0		3.3					
MSG	0	0	0	0	0	0	0.12						
Non-fat dry milk	3	1	38	0	25	0					12		
Salt	.01	0	0	0	40	0	2	3	3	3	0.7	1.8	3
Sugar (sucrose)	.06	0	0	0	10	0						1	
Moist Ingredients													
Water or ice	100	0	0	0	0	0		40	40	40		10	
Fruit & Vegetables													
Onion	89	0	1	0	0	0					2		
Onion, green	87	0	1	0	0	0							5
Calculated composition 12% shrink													
Moisture							57.3	61.9	*62.4	61.6	62.7	55.3	46.7
Fat							20.6	20.1	20.6	21.3	15.4	25.2	31.7
Protein							20.3	14.0	13.0	13.2	15.6	15.5	18.4
Properties													
% Collagen (Max. 35)							*68.0	*56.5	*70.6	*73.8	*59.4	*64.5	*81.5
Bind Points (Min. 1.8)							*1.4	*1.1	*0.7	*0.7	*1.4	*0.9	*0.9
Color Points (Min. 2)							4.8	2.3	2.1	2.2	*1.3	3.3	*1.9

HEAD CHEESE (Brawn)

Average Values

Section 2 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Pork													
Check meat, cured	67	15	17	72	7	25	15						
Ears, salted	50	22	28	99	2	1	10	20					
Head meat	65	16	17	70	7	16			100				
Head meat, cured	67	15	16	70	5	13				40	40		
Head, whole, meat	62	17	17	80	5	20						70	
Heart	73	10	15	27	6	32	25						
Lips	71	14	15	90	1	1	15						
Skin	40	32	28	99	6	1	20	15		30	15	20	15
Snout, pickled	45	40	14	80	2	1	15	40		30	30		40
Tongue, cured	65	17	16	58	8	45		25					25
Trim 80 (lean)	60	23	16	25	16	25						10	
Trim 80 (lean) cured	62	22	15	25	18	22							20
Tripe	74	15	10	100	0	0					15		
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.4			0.4	0.4		0.4
Non-fat dry milk	3	1	38	0	25	0		12					
Salt	.01	0	0	0	40	0	1.5	1.5	1.1	1.5	1.5	3	1.7
Fruit & Vegetables													
Onion	89	0	1	0	0	0	0.2	4					
Calculated composition 12% shrink													
Moisture							51.9	38.8	59.4	44.7	50.4	49.7	45.0
Fat							23.9	28.6	18.0	*30.8	27.9	22.7	*32.8
Protein							21.2	23.2	19.1	21.2	18.2	21.1	18.7
Properties													
% Collagen (Max. 35)							*78.1	*68.8	*70.0	*85.0	*82.7	*80.9	*69.7
Bind Points (Min. 1.8)							*1.0	1.9	*1.3	*1.0	*0.7	*1.3	*1.4
Color Points (Min. 2)							2.2	*1.9	3.1	*1.1	*1.0	3.1	2.8

HEAD CHEESE (Brawn)

Average Values

Section 3 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	Q				
Meat block													
Pork													
Skin	40	32	28	99	6	1	10	10					
Snout, pickled	45	40	14	80	2	1	40	40	50				
Tongue, cured	65	17	16	58	8	45	50	50	50				
Dry Ingredients													
Gelatin	13	0	85	0	20	0	3	3	4				
Salt	.01	0	0	0	40	0	3	1	0.75				
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20	4	30				
Calculated composition 12% shrink													
Moisture							53.9	48.3	58.5				
Fat							25.0	29.1	24.0				
Protein							17.1	19.9	15.5				
Properties													
% Collagen (Max. 35)							*62.7	*62.9	*55.7				
Bind Points (Min. 1.8)							*1.3	*1.5	*1.2				
Color Points (Min. 2)							3.3	3.9	3.1				

HEAD CHEESE (Brawn)

Average Values

Section 4 of 9

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0	1							
Na Erythorbate	0.1	0	0			0.87					
Spices											
Allspice	8.5	8.7	6	0.4			1	1			
Caraway	10	15	20	0.8	1	2	3	1	2	2	
Cayenne	8	17	12								0.2
Cloves	7	22	6			2	1	0.5			0.5
Coriander	5	18	15		1						
Dill	7	4	20						2	2	
Garlic, Powder	6	1	17	0.8		2					
Ginger	9	4	8.5					1			
Mace	8	30	7	0.4							
Marjoram	4	7	11				1	1			
Mustard seed, ground	6	24	30			2					
Onion powder	5	1	10	2		2	1	1			
Pepper black	11	8.5	12	3.2	2						2
Pepper, red	8	17	12						8		
Pepper, white	11	8.5	1.3			4	6	5	8	8	
Sage	3	14	8.5			2					6
Vinegar 90 grain	94	0	0			32					
Vinegar, 100 grain	93	0	0					32		32	

HEAD CHEESE (Brawn)

Average Values

Section 5 of 9

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				9	10	11	12	13	14	
Spices										
Celery seed	6	25	18	0.5						
Cloves	7	22	6	0.5						
Coriander	5	18	15		2					
Marjoram	4	7	11		2	3.5	3			
Mustard seed	6	24	30					7	7	
Nutmeg	8	33	7	2						
Onion powder	5	1	10	1.5						
Pepper, white	11	8.5	1.3	6	6	8	6			
Sage	3	14	8.5				1.5	1.5	1.5	
Thyme	8	7	9	1						
Vinegar, 100 grain	94	0	0		32	32	24	32	16	

Processing Procedures

Section 6 of 9

- A.
1. Cure brine for tongues, 3-5 days
- 83 pounds water
10 pounds salt
3 pounds sugar
2 pounds nitrite and nitrate
- B.
1. Gelatine solution
- 1 pound gelatin
6 pounds water

HEAD CHEESE (Brawn)

Section 7 of 9

Processing Procedures

- C.
 - 1. Cook meat until tender
 - 2. Wash for clear product
 - 3. Dice, 1/2"
 - 4. Mix, gelatin, salt, spices
 - 5. Mix, all ingredients
 - 6. Stuff into casing or molds
 - 7. Chill to 38°F
- D.
 - 1. Cook meat until tender
 - 2. Dice
 - 3. Mix, gelatin, salt, spice
 - 4. Mix, all ingredients
 - 5. Stuff in casing or molds
 - 6. Chill to 38°F
- E.
 - 1. Cook meat, 2 hours, skin in net
 - 2. Cool
 - 3. Grind, 1/8"
 - 4. Mix, add stock for 11% yield
 - 5. Stuff
 - 6. Chill in ice water
 - 7. Chill, 18 hours at 34°F
- F.
 - 1. Place meat in net, cook until tender
 - 2. Grind, skin
 - 3. Cube, rest
 - 4. Mix
 - 5. Add cooking broth
 - 6. Add gelatin if needed
 - 7. Stuff
- G.
 - 1. Place meat in net
 - 2. Cook until tender
 - 3. Grind, skin
 - 4. Cube, rest
 - 5. Mix
 - 6. Add gelatin if needed
 - 7. Stuff

HEAD CHEESE (Brawn)

Section 8 of 9

Processing Procedures

H.

1. Split head, remove skin, ears, eyes, brains
2. Cut off snout
3. Wash and soak in cold salt water
4. Change water, resoak
5. Place in water and cook
6. Skim
7. Remove bones
8. Chop meat
9. Mix with spices
10. Place in pan and press

I.

1. Cook (160°F) in nets till tender
2. Scald to remove grease
3. Grind
4. Mix
5. Add gelatin to desired consistency
6. Stuff
7. Cook, 60 minute at 155°F
8. Cool, 30 minute, room temperature
9. Shower
10. Chill

J.

1. After mix product can be chopped

K.

1. Pre-cure, meat
2. Cook in water
3. Grind meat
4. Mix
5. Stuff
6. Water cook to internal temperature of 180°F
7. Chill in water
8. Chill, 34°F

Cooking Forms

Section 9 of 9

1. Beef bung
2. Hog stomach
3. Mold
4. Loaf pan
5. Artificial casing
6. Beef cap ends

HOLSLEINER, DRY (Salami, B.C.)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	25						
Trim 90 (lean)	71	11	18	28	27	43		60					
Trim 75	58	25	16	38	22	34	33						
Pork													
Backfat	5	93	1	95	0	0		10					
Trim 50	36	52	10	34	12	9		30					
Trim Reg	34	58	8	36	10	8	42						
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0		1					
Salt	.01	0	0	0	40	0	3.4	3.3					
Sugar (sucrose)	.06	0	0	0	10	0	0.25						
Calculated composition 30% shrink													
Moisture							25.9	31.0					
Fat							*50.5	*43.1					
Protein							18.1	19.0					
Properties													
% Collagen (Max. 35)							34.8	29.8					
Bind Points (Min. 1.8)							3.6	4.5					
Color Points (Min. 2)							5.2	6.7					

HOLSLEINER, DRY (Salami, B.C.)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrate	0.1	0	0	2.5	2.5	2					
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Pepper, red, cracked	8	17	12			1					
Pepper, white	11	8.5	1.3	10	6.4	6					

HOLSLEINER, DRY (Salami, B.C.)

Processing Procedures

Section 3 of 4

- A.
 - 1. Grind
 - 2. Mix
 - 3. Cure, 38°F
 - 4. Stuff
 - 5. Green room, dry surface
 - 6. Smoke, 24 hours at 70°F
 - 7. Ship
- B.
 - 1. Grind
 - 2. Mix
 - 3. Cure, 38°F
 - 4. Stuff
 - 5. Green room, dry surface
 - 6. Smoke, 24 hours, 70°F
- C.
 - 1. Chill meat, 32°F
 - 2. Grind beef, 1/8"
 - 3. Chop pork, 1/2"
 - 4. Mix
 - 5. Cure, 3 days, 36°F
 - 6. Mix
 - 7. Stuff
 - 8. Green room, 75°F, 75% RH
 - 9. Smoke, 75°F, 3 days
 - 10. Dry room, 52°F, 65% RH, 26 days

Cooking Form

Section 4 of 4

- 1. Wide (3-1/2") beef middles

HONEY LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Cheek meat	67	15	17	72	9	29	20	20	20	20			
Shank	69	9	21	55	20	25	40	40					
Trim 80 (lean)	60	23	16	25	16	25			40	40	50		
Trim 50	36	52	10	34	12	9	40	40	40	40	50		
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	2		2				
MSG	0	0	0	0	0	0	0.25	0.25	0.12	0.12			
Mustard, heat treated	6	25	31	0	16	5		2		2			
Salt	.01	0	0	0	40	0	0.75	0.75	0.75	0.75	3.1		
Moist Ingredients													
Corn syrup	20	0	0	0	5	0					2		
Honey	17	0	0	0	0	1	2	2	2	2	5		
Water or ice	100	0	0	0	0	0	40	40	40	40	10		
Calculated composition 6% shrink													
Moisture							*63.9	*63.9	*61.3	*61.4	46.1		
Fat							20.1	20.5	24.2	24.6	33.2		
Protein							11.6	12.0	10.1	10.6	11.5		
Properties													
% Collagen (Max. 35)							*53.3	*51.3	*39.3	*37.5	28.5		
Bind Points (Min. 1.8)							1.8	1.9	*1.3	*1.4	*1.7		
Color Points (Min. 2)							2.5	2.6	4.5	2.2	2.2		

HONEY LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.2						
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Cardamon	8	3.5	9	2							
Celery seed, ground	6	25	18		2						
Onion powder	5	1	10		4						
Pepper, white	11	8.5	1.3	6	4						

Processing Procedures

Section 3 of 4

A.

1. Grind, lean pork, 1-1/2"
2. Grind, fat pork, 3/16"
3. Mix, 15 minutes
4. Stuff into molds
5. Steam cook to internal temperature of 155°F
6. Chill to 40°F
7. Chill to 28°F
8. Slice

B.

1. Grind, 80 pounds pork, 1-1/2"
2. Grind, 20 pounds pork, chop
3. Mix
4. Place in pans
5. Cover
6. Water cook, 3 hours at 160°F
7. To internal temperature of 150°F
8. Water chill to 70°F
9. Cool to 34°F

Cooking Form

Section 4 of 4

1. Loaf pan

ITALIAN COOKED SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Trim 85	66	15	18	28	26	41	50						
Pork													
Trim 50	36	52	10	34	12	9	50						
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	2						
Dextrose	.06	0	0	0	10	0	1						
Salt	.01	0	0	0	40	0	2.2						
Calculated composition 11% shrink													
Moisture							42.2						
Fat							*35.8						
Protein							15.0						
Properties													
% Collagen (Max. 35)							30.0						
Bind Points (Min. 1.8)							3.1						
Color Points (Min. 2)							4.4						

ITALIAN COOKED SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Spices											
Fennel, seed	9	15	16	4	4						
Pepper, red	8	17	12	4							
Pepper, white	11	8.5	1.3	6	6						

Processing Procedure

Section 3 of 4

A.

1. Grind, pork, 3/16"
2. Grind, beef, 1/8"
3. Mix
4. Stuff
5. Link
6. Shower, liquid smoke
7. Cook to 150°F internal temperature
8. Cold water chill
9. Pack, below 45°F

Cooking Form

Section 4 of 4

1. Use 30/32 mm hog casing

ITALIAN FRESH SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Trim 85	66	15	18	28	26	41	50						
Pork													
Trim 80 (lean)	60	23	16	25	16	25		50					
Trim 50	36	52	10	34	12	9	50						
Trim Reg	34	58	8	36	10	8		50					
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	2						
Dextrose	.06	0	0	0	10	0	1						
MSG	0	0	0	0	0	0		0.3					
Non-fat dry milk	3	1	38	0	25	0		3.5					
Salt	.01	0	0	0	40	0	2.2	2					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	5					
Calculated composition 2% shrink													
Moisture							52.1	45.9					
Fat							29.7	*37.3					
Protein							12.4	12.3					
Properties													
% Collagen (Max. 35)							30.1	25.8					
Bind Points (Min. 1.8)							2.6	1.9					
Color Points (Min. 2)							3.7	2.1					

ITALIAN FRESH SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Anise	10	16	18	2							
Fennel seed	9	15	16	2	4	4					
Oregano	7	10	11	2							
Paprika	10	13	15	16							
Pepper black	11	8.5	12	4							
Pepper red	8	17	12		4						
Pepper white	11	8.5	1.3		6	6					

Processing Procedures

Section 3 of 4

- A.
1. Grind, 3/16"
 2. Mix
 3. Stuff
 4. Chill
 5. Freeze
 6. Very perishable
- B.
1. Grind
 2. Mix
 3. Stuff
 4. Sell fresh or frozen

Cooking Form

Section 4 of 4

1. Use 30/32 mm hog casing, 4" links

ITALIAN SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Trim 90 (lean)	71	11	18	28	27	43	25						
Veal													
Lean	69	10	19	27	26	30		20					
Pork													
Backfat, cubed	5	93	1	95	0	0		12					
Cured, boiled	55	25	18	25	10	15		24					
Tongue, cured	65	17	16	58	8	45		24					
Trim 80 (lean)	60	23	16	25	16	25		20	25				
Trim 50	36	52	10	34	12	9	75						
Trim Reg	34	58	8	36	10	8			75				
Other Meats or Mixtures or Undesignated													
Sardine, boned	64	12	19	5	5	10		4					
Dry Ingredients													
Pistachio nut	5	54	19	0	0	0		1					
Salt	.01	0	0	0	40	0	0.75	0.75	1				
Sugar (sucrose)	.06	0	0	0	10	0	0.5						
Moist Ingredients													
Water or ice	100	0	0	0	0	0			3				
Fruit & Vegetables													
Capers	94	0	1	0	0	0		1					
Calculated composition 8% shrink													
Moisture							39.3	51.1	36.8				
Fat							*44.8	29.4	*52.0				
Protein							12.9	16.5	10.5				
Properties													
% Collagen (Max. 35)							31.7	32.5	31.5				
Bind Points (Min. 1.8)							2.3	2.3	*1.3				
Color Points (Min. 2)							2.8	4.5	*1.5				

ITALIAN SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices	9	15	16	1	1						
Fennel, seed	8	22	18	0.75	0.75						
Fennel seed, ground	6	1	17	0.12							
Garlic, Powder	10	13	15	1	1						
Paprika	11	8.5	12	2.5	2.5	8					
Pepper, black											

Processing Procedures

Section 3 of 4

- A.
1. Chop all meat except fat and tongues
 2. Cut tongue into long strips
 3. Mix
 4. Stuff
 5. Wrap in cloth and twine
 6. Boil, 1 hour
 7. Cool, 24 hours
- B.
1. Grind, pork, 3/8"
 2. Grind, beef, 1/8"
 3. Mix
 4. Stuff, link
 5. Chill, 32°F or freeze

Cooking Forms

Section 4 of 4

1. Wide hog casing
2. Beef casing

ITALIAN SAUSAGE, HOT

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	70						
Trim 90 (lean)	71	11	18	28	27	43		25					
Trim 80	63	20	17	30	24	39			60				
Pork													
Backfat	5	93	1	95	0	0	10						
Butt	57	29	13	27	16	15				100			
Cheek meat	67	15	17	72	9	29	20						
Trim 80 (lean)	60	23	16	25	16	25			20		25		
Trim 50	36	52	10	34	12	9		75					
Trim Reg	34	58	8	36	10	8			20		75		
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.5	0.75	2.5	2	1		
Sugar (sucrose)	.06	0	0	0	10	0		0.5		0.25			
Moist Ingredients													
Water or ice	100	0	0	0	0	0				5	3		
Fruit & Vegetables													
Pimiento	92	1	1	0	0	60	2		2				
Calculated composition 11% shrink													
Moisture							54.2	37.3	50.5	52.6	34.6		
Fat							25.3	*46.3	*30.3	*30.4	*53.2		
Protein							17.3	13.3	16.1	13.6	10.8		
Properties													
% Collagen (Max. 35)							*39.3	31.8	29.6	27.0	31.6		
Bind Points (Min. 1.8)							3.6	2.3	3.4	2.2	*1.3		
Color Points (Min. 2)							6.2	2.9	5.3	2.0	*1.6		

ITALIAN SAUSAGE, HOT

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Spices											
Caraway	10	15	20		1	0.5	0.5	0.5			
Celery, dry, ground	6	25	18		1						
Chili pepper	8	17	12	4	24	2	2	2			
Coriander	5	18	15		2	1	1	1			
Fennel, seed	9	15	16	4		2	1	1			
Garlic, Powder	6	1	17				0.12				
Nutmeg	8	33	7		2		0.5	0.5			
Paprika	10	13	15		16						
Pepper black	11	8.5	12				1	1			
Pepper, red, cracked	8	17	12				2	2			
Pepper, white	11	8.5	1.3	6							

ITALIAN SAUSAGE, HOT

Section 3 of 4

Processing Procedures

A.

1. Grind
2. Mix
3. Grind
4. Stuff
5. Cold smoke, 30 minute
6. Cook, 150°F to internal temperature of 137°F

B.

1. Chill
2. Grind, 3/16"
3. Mix
4. Stuff
5. Dry, 38°F

C.

1. Grind pork, 3/8"
2. Grind beef, 1/8"
3. Mix
4. Stuff, link
5. Chill, 32°F or freeze

Cooking Forms

Section 4 of 4

1. Use 32-35 mm hog casing
2. Wide hog casing
3. Beef casing

ITALIAN, SWEET

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Butt	57	29	13	27	16	15	100	100					
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.25	2					
Sugar (sucrose)	.06	0	0	0	10	0	0.25	0.25					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	5	5					
Calculated composition 11% shrink													
Moisture							52.4	52.6					
Fat							*30.3	*30.4					
Protein							13.6	13.6					
Properties													
% Collagen (Max. 35)							27.0	27.0					
Bind Points (Min. 1.8)							2.2	2.2					
Color Points (Min. 2)							2.0	2.0					

ITALIAN, SWEET

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Spices											
Fennel, cracked	8	15	16	4	4						
Pepper, black, cracked	9	9	11	4	4						

Processing Procedures

Section 3 of 4

A.

1. Chill, 30°F
2. Grind, 3/16"
3. Mix
4. Stuff
5. Dry, 130°F
6. Med smoke, 165°F to internal temperature of 152°F
7. Shower to 110°F
8. Room temperature, to dry
9. Chill, 18 hours, 38°F

B.

1. Chill to 30°F
2. Grind, 3/16"
3. Mix
4. Stuff
5. Chill, 38°F, 18 hours

Cooking Form

Section 4 of 4

1. Use 32-35 mm hog casing

JERKEY

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	100						
Clod	72	7	20	25	27	42		100					
Round	73	5	21	20	27	45			100				
Shank	71	7	21	48	28	46				100			
Veal													
Lean	69	10	19	27	26	30					100		
Other Meats or Mixtures or Undesignated													
Elk	71	8	21	20	30	48						100	
Venison	71	8	21	20	30	48							100
Dry Ingredients													
Salt	.01	0	0	0	40	0	4	4	4	4	4	4	4
Calculated composition 40% shrink													
Moisture							45.5	48.7	50.3	47.1	43.9	47.1	47.1
Fat							16.0	11.2	8.0	11.2	16.0	12.8	12.8
Protein							32.1	32.1	33.7	33.7	30.4	33.7	33.7
Properties													
% Collagen (Max. 35)							20.0	25.0	20.0	*47.9	27.0	20.0	20.0
Bind Points (Min. 1.8)							9.6	8.7	9.1	9.4	7.9	10.1	10.1
Color Points (Min. 2)							15.1	13.5	15.1	15.5	9.1	16.2	16.2

JERKEY

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Pepper black	11	8.5	12	8							

Processing Procedure

Section 3 of 4

A.

1. Cut meat in direction of grain, long strips
2. Maximum, 1" thick
3. Salt and pepper
4. Place on wire rack
5. Dry 25 hours at 175°F, till brittle
6. Place in cloth, store in cool place for several days
7. Store in air tight container

Cooking Form

Section 4 of 4

1. Rack

KIELBASA (Polish Sausage)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Brisket	65	15	18	40	12	19	20						
Chuck	66	16	18	30	24	38		20					
Plate	41	40	18	42	16	25			20				
Shank	71	7	21	48	28	46				20			
Pork													
Butt	57	29	13	27	16	15	80	80	80	80	100	100	
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0					3		
Salt	.01	0	0	0	40	0	2.5	2.5	2.5	2.5	2.25	2.25	
Soy protein concentrate	8	0	75	0	45	0						3	
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5	0.5	0.5	0.25	0.25	
Moist Ingredients													
Water or ice	100	0	0	0	0	0					10	10	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.2	0.25		0.25		
Calculated composition 5% shrink													
Moisture							54.6	54.8	49.9	58.1	59.9	56.0	
Fat							26.8	26.9	*31.8	23.9	26.4	26.4	
Protein							14.3	14.3	14.3	14.2	12.9	13.9	
Properties													
% Collagen (Max. 35)							30.3	27.7	30.8	33.0	24.8	23.0	
Bind Points (Min. 1.8)							2.1	2.6	2.3	2.8	2.2	2.8	
Color Points (Min. 2)							2.3	3.0	2.5	3.4	*1.8	*1.8	

KIELBASA (Polish Sausage)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0	2							
Spices											
Garlic, Powder	6	1	17	0.25							
Marjoram	4	7	11		1						
Mustard seed	6	24	30	2							
Paprika	10	13	15	1							
Pepper black	11	8.5	12	6	4						
Pepper, red	8	17	12	1							

KIELBASA (Polish Sausage)

Section 3 of 4

Processing Procedures

- A.
1. Grind, lean 1/4", fat 1/8"
 2. Mix
 3. Stuff
 4. Dry
 5. Smokehouse, 130°F, till dry
 6. Heavy smoke, 160°F to internal temperature of 152°F
 7. Shower to 110°F
 8. Room temperature, 30 minute
 9. Chill, 38°F, 12 hrs
- B.
1. Grind, lean 1/4", fat 1/8"
 2. Mix
 3. Dry
 4. Smokehouse, 130°F, till dry
 5. Heavy smoke, 160°F to internal temperature of 135°F
 6. Cook in steam to an internal temperature of 152°F
 7. Shower to 110°F
 8. Room temperature, 30 minute
 9. Chill, 38°F, 12 hrs
- C.
1. Grind, pork 3/8"
 2. Grind, beef 1/8"
 3. Mix
 4. Refrigerate, 24 hours
 5. Stuff
 6. Link
 7. Smoke, 120°F
 8. Cook, 170°F, 30 min
 9. Drain
 10. Chill

Cooking Forms

Section 4 of 4

1. Use 40-42 mm casing
2. Large hog casing, link 12"

KIELBOSA, HUNGARIAN

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Trim 90 (lean)	71	11	18	28	27	43	10						
Pork													
Trim 80 (lean) cured	62	22	15	25	14	20	45						
Trim 50, cured	36	52	10	34	8	6	45						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10						
Calculated composition 6% shrink													
Moisture							52.8						
Fat							*33.3						
Protein							12.6						
Properties													
% Collagen (Max. 35)							28.5						
Bind Points (Min. 1.8)							2.1						
Color Points (Min. 2)							2.5						

KIELBOSA, HUNGARIAN

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Coriander	5	18	15	3	3						
Garlic, Powder	6	1	17	2							
Nutmeg	8	33	7	2	2						
Paprika	10	13	15	6	6						
Pepper, white	11	8.5	1.3	6	6						

Processing Procedure

Section 3 of 4

- A.
1. Chop, beef
 2. Grind, pork
 3. Mix
 4. Stuff
 5. Hold, 18 hours, 38°F
 6. Smoke, 2 hours, 110°F
 7. Cook, 1 hour, 160°F
 8. Cook, 180°F to internal temperature of 148°F
 9. Cook, 3 minutes at 190°F
 10. Shower
 11. Cool, room temperature, 2 hours
 12. Chill

Cooking Forms

Section 4 of 4

1. Use 40-42 mm casing
2. Large hog casing, link 12"

KNOACKWURST (Knoblauch)

Average Values

Section 1 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Bull F.C.	70	10	20	20	30	47	70	45					
Cheek meat	70	20	18	59	14	48			60	50			
Cow F.C.	68	14	18	21	24	39					60		
Trim 90 (lean)	71	11	18	28	27	43						70	70
Trim 70	55	30	15	39	20	31		15					
Tripe, cooked	80	2	19	100	0	0			7	7			
Pork													
Backfat	5	93	1	95	0	0	30					30	30
Cheek meat	67	15	17	72	9	29			13	10			
Trim 80 (lean)	60	23	16	25	16	25				8			
Trim 50, cured	36	52	10	34	10	7			7				
Trim Reg	34	58	8	36	10	8		40	13	25	40		
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	1				1	1	
Dextrose	.06	0	0	0	10	0							0.5
Non-fat dry milk	3	1	38	0	25	0		4.7					3.5
Salt	.01	0	0	0	40	0	2.5	3	2	3	2.5	2.6	2.25
Sugar (sucrose)	.06	0	0	0	10	0			0.5				
Moist Ingredients													
Water or ice	100	0	0	0	0	0	30				30	30	10
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.3			0.12		0.12	
Onion	89	0	1	0	0	0	3				2		2
Calculated composition 4% shrink													
Moisture							*59.3	47.6	60.1	57.1	*62.1	*59.2	51.4
Fat							26.6	*31.2	25.7	28.3	24.3	27.5	*31.4
Protein							10.9	15.7	16.3	15.5	10.8	10.1	12.6
Properties													
% Collagen (Max. 35)							21.6	23.6	*61.8	*58.0	24.3	29.4	26.7
Bind Points (Min. 1.8)							3.2	3.8	1.9	1.8	2.2	2.7	3.3
Color Points (Min. 2)							5.0	5.0	6.1	5.3	3.4	4.2	4.8

KNOACKWURST (Knoblauch)

Average Values

Section 2 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							H	I	J	K	L	
Meat block												
Beef												
Trim 90 (lean)	71	11	18	28	27	43	60					
Trim 80	63	20	17	30	24	39		60				
Trim 75	58	25	16	38	22	34			50	50		
Tripe, cooked	80	2	19	100	0	0			20			
Veal												
Lean	69	10	19	27	26	30					70	
Pork												
Trim Reg	34	58	8	36	10	8		40	30	50	30	
Trim 15 (fat)	11	85	3	60	3	1	40					
Dry Ingredients												
Com syrup solids	3.5	0	0	0	5	0	1					
Dextrose	.06	0	0	0	10	0					0.5	
MSG	0	0	0	0	0	0	0.25		0.25	0.25		
Non-fat dry milk	3	1	38	0	25	0				3.5	3.5	
Salt	.01	0	0	0	40	0	2.6	3	3	2.2	2.25	
Sugar (sucrose)	.06	0	0	0	10	0			0.5	0.5		
Moist Ingredients												
Water or ice	100	0	0	0	0	0	30			10	10	
Fruit & Vegetables												
Garlic, fresh	61	0	6	0	0	0	0.1		0.12	0.12	0.1	
Onion	89	0	1	0	0	0	3	2				
Calculated composition 4% shrink												
Moisture							*56.5	48.6	51.3	46.0	57.3	
Fat							*30.9	*34.9	*30.4	*37.1	21.9	
Protein							9.2	13.3	14.2	11.9	15.3	
Properties												
% Collagen (Max. 35)							31.0	31.4	*54.4	33.6	26.1	
Bind Points (Min. 1.8)							2.2	2.7	2.0	2.2	3.6	
Color Points (Min. 2)							3.5	4.2	2.9	2.7	3.7	

KNOACKWURST (Knoblauch)

Average Values

Section 3 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	1	1	1	1	0.5	0.5		
Na Erythorbate	0.1	0	0	0.87	0.87	0.87					
Spices											
Allspice	8.5	8.7	6	1	1	1				2	1
Celery, dry, ground	6	25	18							4	
Coriander	5	18	15	1	1	1	2		2		0.5
Garlic, Powder	6	1	17	1				0.25	0.25		1
Mace	8	30	7	1	1	1	2	1			1
Marjoram	4	7	11							1	
Nutmeg	8	33	7						1	1	
Onion powder	5	1	10		1						
Paprika	10	13	15								4
Pepper, white	11	8.5	1.3	4	4	4	6	6	6	4	4.5
Sage	3	14	8.5							1	

Average Values

Section 4 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12				
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25				
Spices											
Allspice	8.5	8.7	6	1							
Coriander	5	18	15	0.5	3	2	2				
Mace	8	30	7	1		1					
Mustard seed, ground	6	24	30		1						
Nutmeg	8	33	7		2		1				
Paprika	10	13	15	4							
Pepper, white	11	8.5	1.3	4.5	5	6	6				

KNOACKWURST (Knoblauch)

Section 5 of 7

Processing Procedures

- A.
 - 1. Grind
 - 2. Mix
 - 3. Stuff
 - 4. Cook to internal temperature of 155°F
- B.
 - 1. Chop
 - 2. Stuff
 - 3. Smoke
 - 4. Cook
 - 5. Chill
- C.
 - 1. Grind, 1/8" plate
 - 2. Mix
 - 3. Stuff
 - 4. Dry, 135°F
 - 5. Heavy smoke, 150°F
 - 6. Cook, 165°F, to internal temperature of 152°F
- D.
 - 1. Grind, 1/8" plate
 - 2. Mix
 - 3. Stuff
 - 4. Dry, 135°F
 - 5. Heavy smoke, 150°F
 - 6. Steam cook, 165°F to internal temperature of 152°F
- E.
 - 1. Grind
 - 2. Mix
 - 3. Stuff
 - 4. Water cook to internal temperature of 155°F
 - 5. Water cool to internal temperature of 60°F
 - 6. Chill, 34°F
- F.
 - 1. Grind, beef 1/8"
 - 2. Grind, pork 1/4"
 - 3. Chop
 - 4. Stuff
 - 5. Cure, 18 hours, 40°F
 - 6. Smokehouse, 70°F, 2 hrs
 - 7. Heavy smoke
 - 8. Cook to internal temperature of 152°F
 - 9. Shower to internal temperature of 95°F
 - 10. Dry, 70°F
 - 11. Cooler, 36°F

KNOACKWURST (Knoblauch)

Section 6 of 7

Processing Procedures

G.

1. Grind, beef 1/8"
2. Grind, pork 1/4"
3. Chop
4. Stuff
5. Cure, 38°F, 16 hours
6. Smokehouse, 72°F, 2 hours to dry
7. Heavy smoke
8. Water cook to internal temperature of 154°F
9. Water chill to 90°F internal temperature
10. Dry, 70°F
11. Chill 38°F

H.

1. Grind
2. Chop
3. Stuff
4. Cook to internal temperature of 155°F
5. Shower
6. Dry
7. Chill

Cooking Forms

Section 7 of 7

1. Large casings
2. Use 40-42 mm casing
3. Hog casing (4")
4. Medium beef round
5. Narrow beef round
6. Beef middles
7. Cellulose casing
8. Fibrous casing

KRAKAUER

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Fat	5	94	1	95	0	0	15						
Trim 90 (lean)	71	11	18	28	27	43	65	50	50				
Pork													
Backfat	5	93	1	95	0	0	20	35					
Trim 80 (lean)	60	23	16	25	16	25		15					
Trim Reg	34	58	8	36	10	8			50				
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	1	1	1				
Salt	.01	0	0	0	40	0	3.4	3.4	2.6				
Moist Ingredients													
Rum	57	0	0	0	0	0	0.5	0.5					
Water or ice	100	0	0	0	0	0			15				
Calculated composition 10% shrink													
Moisture							40.0	38.2	52.2				
Fat							*42.2	*44.0	*32.3				
Protein							12.9	12.4	12.2				
Properties													
% Collagen (Max. 35)							29.6	29.5	30.4				
Bind Points (Min. 1.8)							3.3	3.0	2.7				
Color Points (Min. 2)							5.3	4.7	3.9				

KRAKAUER

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0	1	1	2.5					
Na Erythorbate	0.1	0	0	0.87	0.87	0.87					
Spices											
Coriander	5	18	15	0.4	0.4	0.5					
Garlic Powder	6	1	17	0.25	0.25						
Ginger	9	4	8.5	0.4							
Mace	8	30	7	0.4	0.4						
Nutmeg	8	33	7		0.4						
Paprika	10	13	15			0.4					
Pepper black	11	8.5	12	1.6	1.6						
Pepper white	11	8.5	13			3					

Processing Procedures

A.

1. Chill, meat, 32°F
2. Back fat, dried, frozen
3. Grind, beef 1/8"
4. Grind, pork 1"
5. Mix
6. Regrind, 3/8"
7. Cure, 36°F, 3 days
8. Mix
9. Stuff
10. Green room, 70°F, 75% RH, 3 days
11. Smoke, cool
12. Dry, 50°F, 75% RH

B.

1. Grind, 3/4"
2. Chop, 1/4"
3. Mix
4. Cure, 40°F, 8 hours
5. Room temperature, 1 hour
6. Heavy smoke
7. Cook to internal temperature of 152°F
8. Shower to internal temperature of 120°F
9. Chill, 40°F

C.

1. Grind, 3/4"
2. Chop, 1/4"
3. Cure, 40°F, 8 hours
4. Room temperature, 1 hour
5. Heavy smoke
6. Water cook to internal temperature of 155°F
7. Shower to internal temperature of 120°F
8. Chill to 36°F internal temperature

Cooking Forms

Section 4 of 4

1. A 2-1/2" beef middle
2. Wide beef rounds

KRAKOWSKA (KK)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Butt	57	29	13	27	16	15	20						
Ham, fresh	71	7	20	24	18	21	80	100					
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.75	2.75					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	5	5					
Calculated composition 4% shrink													
Moisture							66.6	69.3					
Fat							11.0	6.8					
Protein							18.0	19.3					
Properties													
% Collagen (Max. 35)							24.4	23.8					
Bind Points (Min. 1.8)							3.2	3.5					
Color Points (Min. 2)							3.6	4.1					

KRAKOWSKA (KK)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Spices											
Coriander	5	18	15	0.5							
Garlic, Powder	6	1	17	4							
Marjoram	4	7	11	0.5							
Mustard seed, ground	6	24	30	2							
Pepper, white	11	8.5	1.3	4							

Processing Procedures

Section 3 of 4

A.

1. Grind, lean 1-1/2" plate
2. Grind, fat 1/8" plate
3. Mix
4. Cure, 18 hours, 38°F
5. Stuff
6. Dry, 130°F, 1 hour
7. Heavy smoke, 165°F to internal temperature of 152°F

B.

1. Grind, lean 1-1/2" plate
2. Grind, fat 1/8" plate
3. Mix
4. Cure, 18 hours, 38°F
5. Stuff
6. Dry, 130°F, 1 hour
7. Heavy smoke, 165°F to internal temperature of 130°F
8. Steam cook to 152°F internal temperature

Cooking Form

Section 4 of 4

1. Use 2/3" casing

LANDJAEGAR (Landjager, Landjaeger, Swiss Sausage)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	85						
Cow F.C.	68	14	18	21	24	39		60					
Trim 90 (lean)	71	11	18	28	27	43			75	25			
Trim 85	66	15	18	28	26	41					60		
Pork													
Backfat	5	93	1	95	0	0	15		25				
Trim 80 (lean)	60	23	16	25	16	25		40					
Trim Reg	34	58	8	36	10	8				75	40		
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0			1	1			
Dextrose	.06	0	0	0	10	0					0.4		
Salt	.01	0	0	0	40	0	3.25	4	3.4	3.4	3.4		
Sugar (sucrose)	.06	0	0	0	10	0	0.75	0.75			0.4		
Moist Ingredients													
Wine, sherry	85	0	0	0	0	10	3	0.2			0.25		
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	1		1	1			
Calculated composition 15% shrink													
Moisture							51.4	55.2	43.9	31.3	42.5		
Fat							24.5	19.7	*35.2	*51.6	*36.3		
Protein							18.7	19.3	15.4	11.8	15.8		
Properties													
% Collagen (Max. 35)							20.6	22.5	29.1	32.4	29.8		
Bind Points (Min. 1.8)							5.6	4.1	4.1	2.0	3.5		
Color Points (Min. 2)							8.7	6.5	6.5	2.7	5.3		

LANDJAEGAR (Landjager, Landjaeger, Swiss Sausage)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.2						
Na or K Nitrate	0.1	0	0	2		3	2.5				
Na Erythorbate	0.1	0	0				0.87				
Spices											
Caraway seeds	10	15	20	2	2	2	0.5				
Cardamon	8	3.5	9				0.1				
Coriander	5	18	15				0.4				
Garlic, Powder	6	1	17	1		1					
Pepper, white	11	8.5	1.3	7	6	8	2.5				

LANDJAEGAR (Landjager, Landjaeger, Swiss Sausage) Section 3 of 4

Processing Procedures

- A.
1. Dice, backfat 1/2"
 2. Grind, meat 1/8"
 3. Mix
 4. Stuff
 5. Link, 5"
 6. Press, flat
 7. Hold, 18 hours, 38°F
 8. Smoke and cook
 9. Chill to 40°F internal temperature
- B.
1. Chill, meat 32°F
 2. Dice, backfat and freeze
 3. Grind, beef 1/8"
 4. Do not grind pork trim
 5. Mix
 6. Chop, 1/4"
 7. Cure, 34°F, 18 hours
 8. Mix
 9. Stuff
 10. Press flat
 11. Green room, 70°F, 75% RH, 3 days
 12. Dry, 54°F, 70% RH, 2 days
 13. Light smoke
 14. Chill, 45°F
- C.
1. Dry cure meat
 2. Grind, 1/8"
 3. Mix
 4. Stuff
 5. Press, 40°F
 6. Cold smoke, 24 hours

Cooking Forms

Section 4 of 4

1. Use 35-38 mm beef rounds
2. Use 35 mm Hog casings
3. Link, 5 oz.

LEBERKASE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	35						
Cow F.C.	68	14	18	21	24	39		35					
Liver	72	7	20	95	2	50	2	2					
Pork													
Trim 80 (lean)	60	23	16	25	16	25	28	28					
Trim Reg	34	58	8	36	10	8	35	35					
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.75	2.75					
Soy protein concentrate	8	0	75	0	45	0	3	3					
Sugar (sucrose)	.06	0	0	0	10	0	0.4	0.4					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	10					
Fruit & Vegetables													
Onion	89	0	1	0	0	0	3	3.5					
Calculated composition 5% shrink													
Moisture							54.4	54.0					
Fat							26.8	27.9					
Protein							15.0	14.3					
Properties													
% Collagen (Max. 35)							21.3	21.8					
Bind Points (Min. 1.8)							3.6	3.1					
Color Points (Min. 2)							4.3	3.5					

LEBERKASE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Spices											
Ginger	9	4	8.5	1							
Marjoram	4	7	11	2							
Mustard seed, ground	6	24	30	2							
Nutmeg	8	33	7	2							
Pepper black	11	8.5	12	4							

Processing Procedures

Section 3 of 4

- A.
1. Grind, beef 1/4"
 2. Scald, liver, grind 1/4"
 3. Mix
 4. Grind, pork 3/8"
 5. Mix
 6. Cure, 1 hour, 38°F
 7. Stuff
 8. Water cook, 180°F to internal temperature of 152°F
 9. Shower to internal temperature of 120°F
 10. Chill, 18 hours at 38°F
- B.
1. Grind, beef 1/4"
 2. Scald, liver, grind 1/4"
 3. Mix
 4. Grind, pork 3/8"
 5. Mix
 6. Cure, 1 hour, 38°F
 7. Place in pans
 8. Bake to internal temperature of 152°F
 9. Chill, 24 hrs, 38°F

Cooking Forms

Section 4 of 4

1. Use 3 inch fibrous casings
2. Pans

LINGUISA (Longaniza)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Butt, certified	57	29	13	27	16	15	100	100					
Trim 80 (lean)	60	23	16	25	16	25			100				
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0	3.5						
Salt	.01	0	0	0	40	0	2.25	2.25	2.25				
Soy protein concentrate	8	0	75	0	45	0		3.5					
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	10	20				
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.75	0.12				
Calculated composition 8% shrink													
Moisture							54.0	54.2	62.4				
Fat							27.1	26.9	20.4				
Protein							13.4	14.6	14.2				
Properties													
% Collagen (Max. 35)							24.5	22.3	25.0				
Bind Points (Min. 1.8)							2.3	3.0	2.3				
Color Points (Min. 2)							*1.8	*1.8	3.6				

LINGUISA (Longaniza)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Spices											
Coriander	5	18	15	2							
Cumin seed	8	22	18	1							
Marjoram	4	7	11		2						
Paprika	10	13	15	12	12						
Pepper black	11	8.5	12		1						
Pepper, red	8	17	12	3							
Vinegar, cider or wine	94	0	0	4	16						

Processing Procedures

Section 3 of 4

A.

1. Grind, 75% of the meat 1/2"
2. Grind, 25% of the meat 1/8"
3. Mix
4. Stuff
5. Hang, 18 hours, 70°F
6. Cook to 142°F internal temperature
7. Chill, cold water
8. Pack, below 38°F

B.

1. Dice, meat 1/2"
2. Mix
3. Cure, 18 hours, 36°F
4. Mix with water and vinegar
5. Stuff
6. Air dry
7. Cool smoke, 18 hours, 110°F
8. Warm to 135°F till firm
9. Room temperature to cool
10. Chill, 40°F, 25 days

Cooking Forms

Section 4 of 4

1. Use 23-30 mm hog casings
2. Use 34-36 mm casings

LIVER AND BACON SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Trim 70, cured	55	30	15	39	20	31	6	6	6				
Pork													
Liver	73	7	19	24	2	49	36	36	36				
Trim Reg	34	58	8	36	10	8	45	45	45				
Trim 15 (fat) cured	11	85	3	60	1	1	13	13	13				
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0	3						
Salt	.01	0	0	0	40	0	2	2	2				
Soy protein concentrate	8	0	75	0	45	0		3					
Moist Ingredients													
Egg	74	12	13	0	0	1	4	4	4				
Calculated composition 5% shrink													
Moisture							42.4	42.5	43.7				
Fat							*40.5	*40.5	*41.7				
Protein							12.9	14.0	12.2				
Properties													
% Collagen (Max. 35)							26.4	24.3	28.7				
Bind Points (Min. 1.8)							*0.9	*1.6	*0.7				
Color Points (Min. 2)							3.8	3.8	3.9				

LIVER AND BACON SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Cardamon	8	3.5	9	0.75	0.75						
Celery seed	6	25	18	1.5	1.5						
Lemon oil	0	100	0	0.004							
Nutmeg	8	33	7	2	2						
Pepper, white	11	8.5	1.3	5	5						

Processing Procedure

Section 3 of 4

A.

1. Grind
2. Chop
3. Mix
4. Stuff
5. Cure, 1 hour, room temperature
6. Cook 165°F to internal temperature of 155°F
7. Smoke
8. Cool
9. Dry, 18 hours

Cooking Forms

Section 4 of 4

1. Artificial casing
2. Loaf

LIVER CHEESE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Pork													
Cheek meat	67	15	17	72	9	29	25	25					
Liver	73	7	19	24	2	49	50	50					
Trim Reg	34	58	8	36	10	8	25	25					
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	3						
Cheese, cheddar	37	32	25	0	0	1	1	1					
Non-fat dry milk	3	1	38	0	25	0		3					
Salt	.01	0	0	0	40	0	3	3					
Fruit & Vegetables													
Onion	89	0	1	0	0	0		2					
Calculated composition 4% shrink													
Moisture							56.7	57.0					
Fat							21.5	21.1					
Protein							15.9	16.4					
Properties													
% Collagen (Max. 35)							*37.1	*35.3					
Bind Points (Min. 1.8)							*0.8	*1.0					
Color Points (Min. 2)							5.9	5.9					

LIVER CHEESE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Garlic, Powder	6	1	17	4	4						
Onion powder	5	1	10	8							
Pepper, white	11	8.5	1.3	2	2						

Processing Procedure

Section 3 of 4

A.

1. Scald, liver, 10 min.
2. Cook, pork
3. Grind and chop
4. Add 10-20 pounds meat broth from cooking
5. Chop
6. Stuff or place in pans
7. Cook
8. Chill

Cooking Form

Section 4 of 4

1. Pans lined with back fat and topped with backfat

LIVER LOAF

Average Values

Section 1 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Trim 90 (lean)	71	11	18	28	27	43	50						
Veal													
Lean	69	10	19	27	26	30		50	25	20	18	10	10
Pork													
Backfat, cubed	5	93	1	95	0	0			10			10	10
Bacon ends	19	68	12	86	1	3	10						
Cheek meat	67	15	17	72	9	29			10				
Jowl, skinned	24	71	5	43	5	2					18	20	15
Liver	73	7	19	24	2	49	20	10	35	50	45	30	45
Liver, cured	70	8	20	20	1	40						10	
Trim 50	36	52	10	34	12	9	20						
Trim Reg	34	58	8	36	10	8		40	20	30	18	20	20
Dry Ingredients													
Caseinate	10	0	90	0	40	0	3						
Cereal flour	12	1	10	0	18	0					3.5		
Dextrose	.06	0	0	0	10	0		1					1
Gelatin	13	0	85	0	20	0					2.5		
Non-fat dry milk	3	1	38	0	25	0	10	12	10	12	2	10	12
Pistachio nut	5	54	19	0	0	0						4	4
Salt	.01	0	0	0	40	0	2.75	3.7	3	2.5	3	3.5	3.5
Moist Ingredients													
Egg	74	12	13	0	0	1		6					
Water or ice	100	0	0	0	0	0	30	45	10	12		10	12
Fruit & Vegetables													
Olive, stuffed	78	13	1	0	0	0						10	2
Onion	89	0	1	0	0	0	4	3	4.5	4	2	2	3
Calculated composition 7% shrink													
Moisture							59.9	60.4	52.4	55.4	48.4	44.9	45.2
Fat							17.4	18.7	23.1	19.0	27.1	*32.8	29.9
Protein							16.2	12.6	15.7	16.7	16.9	13.1	14.3
Properties													
% Collagen (Max. 35)							22.8	20.9	25.6	20.6	22.0	19.9	19.5
Bind Points (Min. 1.8)							3.4	2.5	2.2	2.1	1.9	*1.4	*1.6
Color Points (Min. 2)							4.3	2.5	4.5	4.9	5.1	3.3	3.8

LIVER LOAF

	Average Values						Section 2 of 8						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Beef													
Veal													
Lean	69	10	19	27	26	30	10						
Pork													
Bacon ends	19	68	12	86	1	3		10					
Cheek meat	67	15	17	72	9	29			25	25	25	25	25
Ham skin, cured	42	31	27	99	3	1		10					
Jowl, skinned	24	71	5	43	5	2		40					
Liver	73	7	19	24	2	49	50	40	50	50	50	50	50
Trim Reg	34	58	8	36	10	8	40		25	25	25	25	25
Dry Ingredients													
Cereal flour	12	1	10	0	18	0			6	3	3	3	3
Cheese, cheddar	37	32	25	0	0	1			8				
Dextrose	.06	0	0	0	10	0	1						
Non-fat dry milk	3	1	38	0	25	0	12	5					
Pistachio nut	5	54	19	0	0	0					3		
Salt	.01	0	0	0	40	0	3.5	3	3	3	3	3	3
Soy flour	8	1	47	0	30	0		5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	5					
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0					0.12		
Onion	89	0	1	0	0	0	2	0.25				4.5	2
Piniento	92	1	1	0	0	60						4	
Spinach	91	0	3	0	0	0							5
Calculated composition 7% shrink													
Moisture							42.4	38.6	54.1	53.8	53.9	58.0	57.6
Fat							25.4	*37.5	21.5	23.0	23.1	20.5	20.7
Protein							20.7	16.1	16.1	17.0	16.4	15.2	15.4
Properties													
% Collagen (Max. 35)							16.5	*36.1	*37.1	33.6	*36.4	*37.4	*37.4
Bind Points (Min. 1.8)							1.8	*1.4	*0.9	*0.8	*0.8	*0.8	*0.8
Color Points (Min. 2)							4.8	3.5	6.0	5.7	6.0	5.7	5.8

LIVER LOAF

Average Values

Section 3 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	O	R	S	T	U
Meat block													
Pork													
Check meat	67	15	17	72	9	29	25	20					
Head meat	65	16	17	70	7	16			55				
Jowl, skinned	24	71	5	43	5	2				45	22		
Liver	73	7	19	24	2	49	50	35	45	55	50	75	50
Sausage	38	51	9	34	10	5						25	
Trim 80 (lean)	60	23	16	25	16	25		45			16		
Trim Reg	34	58	8	36	10	8	25						50
Trim 15 (fat)	11	85	3	60	3	1					12		
Dry Ingredients													
Bread crumb	7	5	13	0	15	0						10	
Cereal flour	12	1	10	0	18	0	3	5	20				
Cracker meal	4	13	9	0	15	0		5		4			4
Non-fat dry milk	3	1	38	0	25	0						7	
Salt	.01	0	0	0	40	0	3	2.75	2.7	2.5	3	0.5	2.5
Sugar (sucrose)	.06	0	0	0	10	0		0.25			1		
Moist Ingredients													
Egg	74	12	13	0	0	1				1		8	1
Water or ice	100	0	0	0	0	0		10	20			23	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0				0.03			
Onion	89	0	1	0	0	0		3		3	2		4
Calculated composition 7% shrink													
Moisture							55.5	51.7	61.0	45.5	47.7	60.6	48.4
Fat							22.1	14.1	9.2	*35.4	*33.5	14.1	*32.0
Protein							16.3	15.6	15.0	12.9	13.7	15.6	13.5
Properties													
% Collagen (Max. 35)							*37.7	32.0	*43.2	26.3	26.7	19.4	26.5
Bind Points (Min. 1.8)							*0.8	*1.5	*0.9	*0.4	*0.7	*1.0	*0.6
Color Points (Min. 2)							6.1	5.2	4.3	5.0	5.4	5.1	4.8

LIVER LOAF

Average Values

Section 4 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	1	1	1	1	0.5	0.5	0.5	
Na Erythorbate	0.1	0	0								0.87
Spices											
Allspice	8.5	8.7	6	0.2							1
Cardamon	8	3.5	9		2			1			
Celery seed, ground	6	25	18		2						
Cloves	7	22	6	0.5							1
Garlic, Powder	6	1	17						1.5		
Ginger	9	4	8.5			2	1				2
Mace	8	30	7			2					
Marjoram	4	7	11	0.4		3	2	1.5	2	2	2
Mustard seed, ground	6	24	30		2						
Nutmeg	8	33	7								2
Onion powder	5	1	10	5							4
Pepper black	11	8.5	12	0.2							
Pepper, white	11	8.5	1.3			8	6				
Pepper, white, cracked	11	8	10		8			6	6	7	6
Sage	3	14	8.5	1			1		1		

LIVER LOAF

Average Values

Section 5 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				9	10	11	12	13		
Curing Ingredients										
Na or K Nitrite	0.1	0	0	0.12						
Na or K Nitrate	0.1	0	0	1						
Na Erythorbate	0.1	0	0	0.87						
Spices										
Alcohol	66	0	0							
Allspice	8.5	8.7	6	0.5						
Cardamon	8	3.5	9		1					
Celery seed, ground	6	25	18		1.25					
Cinnamon	10	3	4		1					
Cloves	7	22	6	0.5		0.5				
Coriander	5	18	15		3					
Ginger	9	4	8.5	0.5		2	4			
Mace	8	30	7		1.75					
Marjoram	4	7	11	0.5	2			1		
Nutmeg	8	33	7	0.5		1		9		
Onion powder	5	1	10	5			7			
Pepper black	11	8.5	12	4				0.6		
Pepper, white	11	8.5	13					9		
Pepper, white, cracked	11	8	10		2	6	2			
Sage	3	14	8.5	0.5				1		
Vinegar, 90 grain	94	0	0		10.75					

LIVER LOAF

Section 6 of 8

Processing Procedures

A.

1. Coating mixture

- 17 pounds water
- 3 pounds gelatin
- 3 pounds nonfat dry milk
- 1 pound salt
- 6 pounds corn flower
- 3 pounds lard

2. Mix

3. Heat to 110°F

4. Dip, liver loaf

5. Chill

B.

1. Grind, meat 1/4"

2. Soak, liver, cold water, 2 hours

3. Chop, liver and cheek meat

4. Chop, all ingredients

5. Place in greased pan

6. Bake

- 1 hr - 250°F

- 2 hrs - 300°F

- 5 hrs - 350°F

7. Glaze with hot sugar water

8. Cool

C.

1. Soak, liver in cold water, scald

2. Slash meat, soak in cold water

3. Cook meat, 20 minutes, chill

4. Grind, mix, add 18 pounds cooking broth

5. Place in pan lined with caul fat

6. Cook, 165°F, 3 hrs

7. Press and chill

8. Remove from mold

9. Dip in gelatin

10. Stuff

LIVER LOAF

Section 7 of 8

Processing Procedures

D.

1. If beef liver used, soak in salt water
2. Scald
3. Grind
4. Cook meat, 30 minutes, 210°F, grind
5. Mix, add 20 pounds cooking broth
6. Hold, 38°F, 3 hours
7. Stuff
8. Cook, 160°F, 3.5 hours
9. Chill, ice water
10. Cool, 18 hours

E.

1. Grind, meat 3/16"
2. Chop, 50°F
3. Add milk products, chop to 60°F
4. Stuff in mold
5. Steam or water cook to 150°F internal temperature
6. Chill to 40°F
7. Remove from mold
8. Coat
9. Chill to 28°F for slicing

F.

1. Cut liver, wash cold water
2. Scald, 10 minutes
3. Chop and mix
4. Place in pan lined with fat
5. Cook, 160°F, 3 hours
6. Cook to internal temperature of 150°F

G.

1. Chill, meat, 34°F
2. Slice liver
3. Soak liver, 1% salt, 18 hours
4. Grind, meat 1/4"
5. Grind, liver 1/8"
6. Chop, liver
7. Chop, liver with meat
8. Pack in cans
9. Vacuum seal
10. Water cook to internal temperature of 155°F
11. Water chill
12. Chill, 34°F
13. Perishable

Cooking Forms

Section 8 of 8

1. Pan
2. Molds
3. Cans
4. Artificial casing after cooking

LIVER PATE

Average Values

Section 1 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Tripe, fresh	82	10	9	100	0	0	26	13					
Pork													
Backfat	5	93	1	95	0	0			47				
Bacon ends	19	68	12	86	1	3				7	7	5	
Bacon, raw	35	55	8	86	0	3							14
Butt	57	29	13	27	16	15							30
Jowl, skinned, cured	24	71	5	43	5	2	13	13					
Liver	73	7	19	24	2	49			53				
Liver, cooked	70	8	20	20	1	40	26	26		93	93	30	26
Snout, pickled	45	40	14	80	2	1	11	11					
Trim 80 (lean)	60	23	16	25	16	25	24	24				20	
Trim Reg	34	58	8	36	10	8						45	30
Tripe	74	15	10	100	0	0		13					
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	26	26					
Dry Ingredients													
Cereal flour	12	1	10	0	18	0			3.3				
Mustard, heat treated	6	25	31	0	16	5				12.5	12.5		
Salt	.01	0	0	0	40	0	2.5	2.5	2	2	2	1.5	2
Moist Ingredients													
Egg, hard boiled	74	12	13	0	0	1				20			
Mayonnaise	15	80	1	0	0	0				45	47.5		
Fruit & Vegetables													
Onion	89	0	1	0	0	0		0.5		8		0.5	
Onion, green	87	0	1	0	0	0					11.5		10
Pickle, relish	63	1	0	0	0	0				13	13		
Calculated composition 5% shrink													
Moisture							63.2	62.4	36.2	41.5	38.5	41.1	46.4
Fat							20.4	20.8	*47.4	*30.2	*32.3	*38.9	*34.7
Protein							13.5	13.5	10.9	18.8	18.7	16.9	14.4
Properties													
% Collagen (Max. 35)							*40.6	*41.2	26.3	20.7	22.4	24.7	31.0
Bind Points (Min. 1.8)							*0.7	*0.7	*0.3	*0.6	*0.7	*1.0	*1.0
Color Points (Min. 2)							3.9	3.9	4.9	7.3	7.8	4.2	4.4

LIVER PATE

Average Values							Section 2 of 6						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	
Pork													
Liver, cooked	54	12	30	24	2	49	30	30					
Trim 80 (lean)	60	23	16	25	16	25	20	20					
Trim Reg	34	58	8	36	10	8	50	45					
Trim 15 (fat)	11	85	3	60	3	1		5					
Poultry													
Chicken													
Fat	5	95	1	95	0	0			10	9			
Gizzard	70	7	20	35	7	25			30	24			
Heart	71	11	16	27	6	32			10	13			
Liver	70	4	21	24	2	49			40	27			
Skin, cooked	22	15	60	99	6	0			10	27			
Turkey													
Fat	5	93	1	95	0	0					10	9	
Gizzard	70	7	20	35	7	25					30	24	
Heart	71	11	16	27	6	32					10	13	
Liver	70	4	21	24	2	49					40	27	
Skin, cooked	48	39	12	99	6	0					10	27	
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5			25	23	25	23	
Dry Ingredients													
Bread crumb	7	5	13	0	15	0			5		5		
Mustard, heat treated	6	25	31	0	16	5		5		5			
Salt	.01	0	0	0	40	0	1.5	1.5	3	1.8	3	1.8	
Fruit & Vegetables													
Onion	89	0	1	0	0	0		0.2	0.2		0.8		
Onion, green	87	0	1	0	0	0	50			5		10	
Calculated composition 5% shrink													
Moisture							56.4	44.3	61.2	56.2	63.3	*64.9	
Fat							25.8	*37.8	12.7	14.1	14.4	18.0	
Protein							11.6	14.0	18.2	23.9	14.3	12.7	
Properties													
% Collagen (Max. 35)							26.4	25.0	*45.6	*64.5	32.1	*42.4	
Bind Points (Min. 1.8)							*0.8	*1.2	*0.9	*1.4	*0.7	*0.6	
Color Points (Min. 2)							3.8	3.9	4.9	3.7	4.8	3.6	

LIVER PATE

Average Values

Section 3 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Spices											
Allspice	8.5	8.7	6	1	0.2	2	1	0.5	0.2		
Cardamon	8	3.5	9	1		2	1				
Celery seed	6	25	18							12	
Cloves	7	22	6		0.3			0.5	0.2		
Marjoram	4	7	11	2	0.5	4	2	0.5	0.4		6.6
Mustard prepared	80	4	5						1		
Nutmeg	8	33	7		0.2			0.5	0.2		3.3
Pepper black	11	8.5	12		4.5			4	4	4	
Pepper, white	11	8.5	1.3	4		8	4				8
Pimiento, powder	8	17	12								3.3
Sage	3	14	8.5		1.5			0.5	0.4	2	

Average Values

Section 4 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9							
Spices											
Mustard, prepared	80	4	5	10							
Pepper black	11	8.5	12	4							

LIVER PATE

Section 5 of 6

Processing Procedures

- A.
 - 1. Mix cooked product
 - 2. Mix
 - 3. Use as a sandwich filling
- B.
 - 1. Mix
 - 2. Blend and puree or use fine blade of meat chopper
 - 3. Chill
 - 4. Serve in lettuce cups
- C.
 - 1. Blanch liver, chop
 - 2. Coarse chop, meat
 - 3. Cook meat to 155°F internal temperature
 - 4. Chill to 120°F
 - 5. Mix with broth
 - 6. Stuff
 - 7. Water or steam cook in 170°F
 - 8. Cook to internal temperature of 155°F
 - 9. Chill in ice water
- D.
 - 1. Scald, liver
 - 2. Chop
 - 3. Cook all ingredients
 - 4. Chill
 - 5. Cooled to 140°F internal temperature before stuffing
- E.
 - 1. Soak, tripe in vinegar
 - 2. Rinse
 - 3. Soak, liver in salt water
 - 4. Cook, meat
 - 5. Grind, 1/8"
 - 6. Chop and mix
 - 7. Stuff
 - 8. Retail

Cooking Form

Section 6 of 6

- 1. Cans, 3 oz.

LIVER SAUSAGE

Average Values

Section 1 of 17

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Brain	79	9	10	85	1	0	5						
Brisket	65	15	18	40	12	19	10						
Fat	5	94	1	95	0	0		10					
Flank	43	42	13	24	12	20		55	30	25			
Liver	72	7	20	95	2	50	35	30	30		30		
Lungs	78	2	18	95	1	10						25	
Plate	41	40	18	42	16	25					30		
Trim 90 (lean)	71	11	18	28	27	43							10
Calf													
Liver	71	5	19	95	2	35		5					
Veal													
Lean	69	10	19	27	26	30	50		40		40		
Pork													
Jowl, skinned	24	71	5	43	5	2						8	
Liver	73	7	19	24	2	49				50		17	50
Snout	45	40	14	80	2	1						50	
Trim 50	36	52	10	34	12	9							40
Trim Reg	34	58	8	36	10	8				25			
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5						34	25
Dry Ingredients													
Bread crumb	7	5	13	0	15	0						34	
Dextrose	.06	0	0	0	10	0	0.4						
Non-fat dry milk	3	1	38	0	25	0				3.5			
Rye flour	11	2	12	0	16	0							10
Salt	.01	0	0	0	40	0	2.5	3	2.5	1.5	2.5	3.3	1.8
Sugar (sucrose)	.06	0	0	0	10	0		0.4					
Moist Ingredients													
Egg	74	12	13	0	0	1	4						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0				0.03			
Onion	89	0	1	0	0	0		3		4	3		
Calculated composition 3% shrink													
Moisture							67.4	47.5	59.4	53.1	54.6	52.5	60.1
Fat							9.5	*33.8	18.8	27.0	17.7	17.5	19.3
Protein							18.9	13.8	17.6	15.2	18.6	12.0	12.6
Properties													
% Collagen (Max. 35)							*52.9	*58.5	*49.6	23.5	*52.7	*53.7	24.8
Bind Points (Min. 1.8)							2.7	*1.0	2.6	*1.1	2.9	*0.6	*1.0
Color Points (Min. 2)							6.5	4.6	6.1	5.2	6.5	*1.3	4.4

LIVER SAUSAGE

Average Values

Section 2 of 17

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Beef													
Trim 75	58	25	16	38	22	34	7						
Trim 50	38	50	11	42	12	19		20					
Tripe, fresh	82	10	9	100	0	0	13		30	30	30	30	20
Pork													
Cheek meat	67	15	17	72	9	29		20					
Jowl, skinned	24	71	5	43	5	2		20					20
Liver	73	7	19	24	2	49	37	20	35	35	35	35	30
Skin	40	32	28	99	6	1							30
Snout	45	40	14	80	2	1	15	20	35	35	35	35	
Trim Reg	34	58	8	36	10	8	28						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.4	1	0.5	0.5	0.25	0.25	
Non-fat dry milk	3	1	38	0	25	0			3.5				
Salt	.01	0	0	0	40	0	2.1	2.75	2.25	2.25	3.3	2.5	3.5
Soy protein concentrate	8	0	75	0	45	0				3.5			
Moist Ingredients													
Water or ice	100	0	0	0	0	0		15					
Fruit & Vegetables													
Onion	89	0	1	0	0	0		5	3				
Calculated composition 3% shrink													
Moisture							55.2	*54.3	61.6	61.1	62.5	63.0	51.8
Fat							28.0	*30.5	18.4	18.9	19.4	19.5	27.8
Protein							13.7	11.0	14.7	16.4	14.2	14.3	16.8
Properties													
% Collagen (Max. 35)							*42.4	*52.7	*52.7	*48.6	*57.6	*57.6	*70.6
Bind Points (Min. 1.8)							*0.7	*0.6	*0.5	*1.4	*0.2	*0.2	5.6
Color Points (Min. 2)							4.0	2.8	3.1	3.2	3.3	3.3	2.9

LIVER SAUSAGE

Average Values

Section 3 of 17

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	Q	R	S	T	U
Meat block													
Beef													
Tripe, fresh	82	10	9	100	0	0	20	20	20	18			
Veal													
Lean	69	10	19	27	26	30				12	30	30	20
Pork													
Jowl, skinned	24	71	5	43	5	2	20				35	35	30
Liver	73	7	19	24	2	49	30	30	30	35	35	35	30
Skin	40	32	28	99	6	1		30					
Snout	45	40	14	80	2	1	30		30				
Trim 80 (lean)	60	23	16	25	16	25							20
Trim Reg	34	58	8	36	10	8		20	20	35			
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	25	25	25				
Dry Ingredients													
Dextrose	.06	0	0	0	10	0					0.4	0.4	
MSG	0	0	0	0	0	0					0.2		
Non-fat dry milk	3	1	38	0	25	0						3.5	
Rye flour	11	2	12	0	16	0	10	10	10				
Salt	.01	0	0	0	40	0	3.2	3.5	3.5	3	2.25	2.25	2.5
Fruit & Vegetables													
Onion	89	0	1	0	0	0						4	
Calculated composition 3% shrink													
Moisture							*58.4	58.7	*59.8	57.5	51.7	51.5	52.1
Fat							22.8	19.0	20.8	25.8	*30.4	*31.6	*30.2
Protein							10.6	14.1	11.0	13.4	14.1	14.5	12.5
Properties													
% Collagen (Max. 35)							*49.0	*63.7	*48.1	*36.1	27.6	25.1	30.9
Bind Points (Min. 1.8)							*0.3	*0.7	*0.4	*1.0	*1.7	1.9	*1.7
Color Points (Min. 2)							2.1	2.2	2.2	4.2	5.0	4.7	4.8

LIVER SAUSAGE

Average Values

Section 4 of 17

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							V	W	X	Y	Z	AA	AB
Beef													
Veal													
Lean	69	10	19	27	26	30	19	15					
Pork													
Backfat	5	93	1	95	0	0	16		25	20	20	20	15
Head meat	65	16	17	70	7	16				45	45		15
Liver	73	7	19	24	2	49	65	40	30	35	35	35	50
Snout	45	40	14	80	2	1							20
Trim 80 (lean)	60	23	16	25	16	25			45			45	
Trim Reg	34	58	8	36	10	8		45					
Dry Ingredients													
Cereal flour	12	1	10	0	18	0				11	4.5		
Dextrose	.06	0	0	0	10	0		0.4					
MSG	0	0	0	0	0	0	0.2						
Rusk	5	9	14	0	16	0					2.2		
Salt	.01	0	0	0	40	0	1.25	2.5	2.5	3.5	3.5	2.5	3.1
Soy flour	8	1	47	0	30	0					4.5		
Moist Ingredients													
Wine, white	85	0	0	0	0	0	2						
Fruit & Vegetables													
Onion	89	0	1	0	0	0	4	3					
Truffle, canned	75	0	9	0	0	0	0.12						
Calculated composition 3% shrink													
Moisture							60.8	52.9	47.3	48.3	48.0	50.8	52.9
Fat							20.4	29.6	*35.9	25.5	25.7	*31.6	27.8
Protein							15.5	13.7	13.2	14.0	15.6	14.1	15.0
Properties													
% Collagen (Max. 35)							25.3	27.6	25.9	*45.9	*41.1	25.6	*43.0
Bind Points (Min. 1.8)							*1.1	*1.2	*1.3	*0.8	*1.3	*1.3	*0.7
Color Points (Min. 2)							6.8	4.7	4.6	4.0	4.0	5.1	5.1

LIVER SAUSAGE

Average Values

Section 5 of 17

	M o i s t u r e	F a t	P r o t e i n	%	B i n d	C o l l a g e n	C o l o r	Pounds for Various Formulations						
								AC	AD	AE	AF	AG	AH	AI
Meat block														
Pork														
Backfat	5	93	1	95	0	0		10						
Belly trim	25	68	6	35	6	5		30						
Cheek meat	67	15	17	72	9	29			20	15	15			
Ham fat, cured	15	81	4	93	0	0					15	15		
Head meat	65	16	17	70	7	16		20					62.5	50
Jowl, skinned	24	71	5	43	5	2			20					
Liver	73	7	19	24	2	49	40	30	20	50	50	50	37.5	50
Snout	45	40	14	80	2	1			20	20	20			
Trim 80 (lean)	60	23	16	25	16	25	50	20						
Trim Reg	34	58	8	36	10	8			20					
Other Meats or Mixtures or Undesignated														
Cooking broth	99	0	1	0	0	5							12.5	
Dry Ingredients														
Corn syrup solids	3.5	0	0	0	5	0		0.5						
Dextrose	.06	0	0	0	10	0			1					
MSG	0	0	0	0	0	0			0.2					
Non-fat dry milk	3	1	38	0	25	0					3.5			
Rice	12	1	7	0	40	0							10	10
Salt	.01	0	0	0	40	0	2.5	2.5	2.75	2.5	2.5	2.5	2.5	3
Moist Ingredients														
Water or ice	100	0	0	0	0	0			15					
Fruit & Vegetables														
Onion	89	0	1	0	0	0		3.5	4			3		4
Calculated composition 3% shrink														
Moisture								57.0	52.6	*53.2	53.2	56.0	64.2	61.9
Fat								23.7	29.3	*32.0	25.2	25.3	10.5	10.2
Protein								15.8	13.7	10.6	16.3	15.1	15.3	16.5
Properties														
% Collagen (Max. 35)								24.9	*36.6	*52.3	*41.3	*44.7	*49.3	*43.9
Bind Points (Min. 1.8)								*1.4	*0.9	*0.5	*0.8	*0.5	*1.0	*0.9
Color Points (Min. 2)								5.8	4.1	2.5	5.3	5.3	4.3	5.3

LIVER SAUSAGE

Average Values

Section 6 of 17

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AJ	AK	AL	AM	AN	AO	AP
Meat block													
Pork													
Jowl, skinned	24	71	5	43	5	2	50	50	50	45	45	25	20
Liver	73	7	19	24	2	49	50	50	50	55	55	30	35
Skin	40	32	28	99	6	1							
Stomach	71	13	15	62	1	0							
Trim 80 (lean)	60	23	16	25	16	25						45	45
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5							
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.25			1			
Isolated soy protein	8	0	90	0	40	0		2					
Non-fat dry milk	3	1	38	0	25	0				4			
Rye flour	11	2	12	0	16	0							
Salt	.01	0	0	0	40	0	2.5	2.5	3	3	3	2.5	2.5
Soy protein concentrate	8	0	75	0	45	0					4		
Moist Ingredients													
Corn syrup	20	0	0	0	5	0		2					
Water or ice	100	0	0	0	0	0		2.5		4	4		
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.03						
Onion	89	0	1	0	0	0		4	4	3.5			
Calculated composition 3% shrink													
Moisture							45.6	47.2	47.1	48.8	50.9	52.1	54.6
Fat							*39.1	*35.6	*37.6	*32.0	*33.2	*30.4	27.2
Protein							12.0	12.6	11.6	12.7	14.6	14.2	14.9
Properties													
% Collagen (Max. 35)							28.0	24.3	27.9	24.4	22.1	26.2	25.8
Bind Points (Min. 1.8)							*0.3	*0.9	*0.3	*0.6	*1.6	*1.3	*1.3
Color Points (Min. 2)							4.7	4.3	4.5	4.6	4.8	4.6	5.1

LIVER SAUSAGE

Average Values

Section 7 of 17

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AQ	AR	AS	AT	AU	AV	AW
Meat block													
Pork													
Jowl, skinned	24	71	5	43	5	2	20	20	10				
Liver	73	7	19	24	2	49	30	30	40	50	35	35	35
Skin	40	32	28	99	6	1	30						
Snout	45	40	14	80	2	1		30			35		
Stomach	71	13	15	62	1	0	20	20			30		
Trim 80 (lean)	60	23	16	25	16	25			50			30	30
Trim 50	36	52	10	34	12	9				50			
Trim 15 (fat)	11	85	3	60	3	1						35	35
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	25	25					
Dry Ingredients													
Dextrose	.06	0	0	0	10	0				0.25	0.25		
Non-fat dry milk	3	1	38	0	25	0						3.5	
Rye flour	11	2	12	0	16	0	10	10					
Salt	.01	0	0	0	40	0	3.5	3.5	2.5	2.5	2.5	2.25	2.25
Fruit & Vegetables													
Onion	89	0	1	0	0	0			3	3.5	1.5	4	
Truffle, canned	75	0	9	0	0	0							3
Calculated composition 3% shrink													
Moisture							55.5	*56.6	59.7	52.8	60.1	44.9	45.5
Fat							21.4	23.1	20.9	28.6	20.1	*36.8	*38.3
Protein							14.6	11.4	15.8	14.1	15.9	13.0	12.5
Properties													
% Collagen (Max. 35)							*61.0	*45.8	25.0	27.4	*51.7	24.8	26.8
Bind Points (Min. 1.8)							*0.7	*0.3	*1.4	*0.8	*0.3	*1.2	*0.9
Color Points (Min. 2)							2.2	2.1	5.6	5.0	3.3	4.2	4.4

LIVER SAUSAGE

Average Values

Section 8 of 17

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AX	AY	AZ				
Meat block													
Pork													
Liver	73	7	19	24	2	49	30	30	20				
Skin	40	32	28	99	6	1	30		40				
Snout	45	40	14	80	2	1		30					
Stomach	71	13	15	62	1	0	20	20					
Trim 50	36	52	10	34	12	9			40				
Trim Reg	34	58	8	36	10	8	20	20					
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	25	25					
Dry Ingredients													
Rye flour	11	2	12	0	16	0	10	10					
Salt	.01	0	0	0	40	0	3.5	3.5	2.5				
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0			0.03				
Calculated composition 3% shrink													
Moisture							57.0	*58.1	42.2				
Fat							19.4	21.2	*35.2				
Protein							15.0	11.9	19.1				
Properties													
% Collagen (Max. 35)							*60.1	*44.8	*70.3				
Bind Points (Min. 1.8)							*0.7	*0.4	*1.2				
Color Points (Min. 2)							2.2	2.2	2.3				

LIVER SAUSAGE

Average Values

Section 9 of 17

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	2	1	0.75					
Na Erythorbate	0.1	0	0				0.87	0.87	0.87	0.87	
Spices											
Allspice	8.5	8.7	6				1	1	0.3	0.3	
Cloves	7	22	6				1	1	0.3	0.3	0.5
Ginger	9	4	8.5		2	2	2	2	0.75	0.75	0.5
Mace	8	30	7	2					0.75		
Marjoram	4	7	11	2	2	1	2	2	0.75	0.75	2
Mustard seed, ground	6	24	30				1	1			
Nutmeg	8	33	7				2	2		0.75	
Onion powder	5	1	10			4	3		4	4	12
Pepper, white	11	8.5	1.3	5	6	6	8	8	3	3	4
Thyme	8	7	9						0.3	0.3	

LIVER SAUSAGE

Average Values

Section 10 of 17

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14	15	16
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.15	0.15	0.12	0.12		
Na Erythorbate	0.1	0	0			0.87		0.87			
Spices											
Allspice	8.5	8.7	6			0.5		0.3		1	
Cardamon	8	3.5	9						0.3		1.75
Celery seed, ground	6	25	18								1
Cinnamon	10	3	4								0.75
Cloves	7	22	6			0.5		0.3			
Coriander	5	18	15								2.5
Garlic, Powder	6	1	17					2			
Ginger	9	4	8.5	0.5	0.5	0.5	0.5	0.7	0.7		
Liquid smoke	80	0	0					1			
Mace	8	30	7						0.7		1.5
Marjoram	4	7	11	0.75	0.5	0.5	0.5	0.1		2	
Nutmeg	8	33	7	0.5		0.5	0.5	0.7			
Onion powder	5	1	10	5		4.8	3.2	4		2.5	
Pepper, white	11	8.5	1.3	4	4	4	6	3	3	4	6.5
Sage	3	14	8.5	0.5		0.5	0.5				
Thyme	8	7	9					0.3			

LIVER SAUSAGE

Average Values

Section 11 of 17

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				17	18	19	20	21	22	23	24
Spices											
Cardamon	8	3.5	9	1.75	1.75	1.75					
Celery seed, ground	6	25	18	1	1	1	2	2	1	1	
Cinnamon	10	3	4	0.75	0.75	0.75					0.2
Cloves	7	22	6								0.2
Coriander	5	18	15	2	2	2	2	2	2	2	
Ginger	9	4	8.5				2				1.2
Mace	8	30	7	1.5	1.5	1.5	1.5	1.5			
Marjoram	4	7	11								1.2
Nutmeg	8	33	7						2	2	
Onion juice	95	0	1	10.5					12		
Onion powder	5	1	10		6.5					4	
Pepper, white	11	8.5	1.3	6	6	6	6	6	7	7	5

Average Values

Section 12 of 17

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				25	26	27	28	29	30	31	32
Spices											
Cloves	7	22	6	1	0.5	0.5	0.5	0.4			
Ginger	9	4	8.5	1				0.5			
Mace	8	30	7		2	2	2				
Marjoram	4	7	11	1.5	1	1	1	1.5	3.3	2	2
Nutmeg	8	33	7							1	1
Onion juice	95	0	1		21					27	
Onion powder	5	1	10	5		6.5		3.2			8
Paprika	10	13	15						1.6		
Pepper black	11	8.5	12	4				2			
Pepper, white	11	8.5	1.3		6	6	6		6.6	6	6

LIVER SAUSAGE

Average Values

Section 13 of 17

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat					
				33	34	35	36		
Spices									
Marjoram	4	7	11	2	2	1.5			
Nutmeg	8	33	7	1					
Paprika	10	13	15		1	2			
Pepper, black	11	8.5	12		5	5			
Pepper, white	11	8.5	1.3	6			6		

Processing Procedures

Section 14 of 17

A.

1. Soak, liver in 20°F salometer salt water
2. Scald
3. Grind
4. Mix
5. Stuff
6. Cook to internal temperature of 150°F
7. Chill

B.

1. Soak, liver in salt water
2. Grind
3. Mix
4. Stuff
5. Cook to 150°F internal temperature
6. Chill

C.

1. Wash and scald, liver
2. Cook meat, 1 hour
3. Chop, Mix
4. Stuff
5. Cook, 35 minutes, 175°F
6. Cool, ice water
7. Chill

LIVER SAUSAGE

Processing Procedures

Section 15 of 17

D.

1. Scald, liver
2. Cook meat, 1 hour
3. Cool
4. Grind, 1/8"
5. Add cooking broth to yield green wt.
6. Stuff
7. Cook, in 165°F water to internal temperature of 152°F
8. Chill, ice water
9. Spray with 180°F water
10. Cool smoke (optional)
11. Chill

E.

1. Scald, liver
2. Chop fine
3. Chop fat, med fine
4. Mix
5. Stuff
6. Cook, 50-75 minutes

F.

1. Grind
2. Chop and mix
3. Stuff
4. Cook, 45 minutes, 160°F
5. Chill
6. Rinse

G.

1. Cook rice and drain
2. Cook meat and save 15 lbs. broth
3. Fry onions till brown
4. Blanch, liver
5. Grind, 1/8"
6. Mix
7. Stuff
8. Cook in 170°F water to an internal temperature of 152°F
9. Cool in ice water to 40°F internal temperature
10. Chill, 18 hours, 38°F

H.

1. Soak liver
2. Chop and mix
3. Stuff
4. Cook, 180°F, 2-1/2 hrs
5. Chill in ice water
6. Dry
7. Smoke, cool

LIVER SAUSAGE

Processing Procedures

Section 16 of 17

- I.
 - 1. Cook, meat until tender
 - 2. Grind
 - 3. Chop
 - 4. Stuff
 - 5. Cook 40 minutes at 160°F
 - 6. Chill in ice water to 40°F internal temperature
- J.
 - 1. Cook, meat
 - 2. Fine chop
 - 3. Mix
 - 4. Fine chop
 - 5. Sieve
 - 6. Mix seasoning
 - 7. Stuff, 3/4 full, space for expansion
 - 8. Boil, 1 hour
 - 9. Dry
 - 10. Smoke, 4 days
- K.
 - 1. Cook, meat, 1 hr
 - 2. Grind, 1/8"
 - 3. Mix
 - 4. Grind
 - 5. Stuff
 - 6. Cook, 160°F water, 1.5 hour
 - 7. Cook to internal temperature of 152°F
 - 8. Ice water chill, 45 minutes
 - 9. Dry, room temperature
 - 10. Chill, 18 hours, 38°F

Cooking Forms

Section 17 of 17

- 1. Use 42-44 mm casing
- 2. Beef rounds
- 3. Beef middle
- 4. Sewed hog bung
- 5. Prime hog bung
- 6. Artificial casing
- 7. Opaque cellulose casing
- 8. Medium hog casing
- 9. Large hog casing

LOAF

Average Values

Section 1 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Trim 75	58	25	16	38	22	34	60	45					
Trim 70	55	30	15	39	20	31			60				
Veal													
Lean	69	10	19	27	26	30	20		20	86	50	25	
Pork													
Backfat, cubed	5	93	1	95	0	0		10					5
Butt	57	29	13	27	16	15		35					
Sausage	38	51	9	34	10	5				14			
Tongue, cubed	63	19	17	66	8	36							5
Trim 80 (lean), cubed	60	23	16	25	16	25					50	75	
Trim Reg	34	58	8	36	10	8		10	20				
Trim 15 (fat)	11	85	3	60	3	1	20						
Other Meats or Mixtures or Undesignated													
Bologna meat (unsalted)	56	30	12	39	20	31							90
Dry Ingredients													
Bread crumb	7	5	13	0	15	0	10		9				
Corn flake	4	0	8	0	10	0					9		
Cracker crumbs	4	13	9	0	15	0				5			
Non-fat dry milk	3	1	38	0	25	0		12					
Pistachio nut	5	54	19	0	0	0		2					2
Salt	.01	0	0	0	40	0	2.5	3	2.5	0.7	0.7	0.4	3
Soy protein concentrate	8	0	75	0	45	0	3		3				
Sugar (sucrose)	.06	0	0	0	10	0							0.5
Moist Ingredients													
Egg	74	12	13	0	0	1	10		9	9	11	11	
Milk	87	3	4	0	0	0	16		16		25		
Water or ice	100	0	0	0	0	0	7		8				
Fruit & Vegetables													
Celery, fresh chopped	94	0	1	0	0	0				40			
Cranberry sauce	62	0	0	0	0	90					13		
Onion	89	0	1	0	0	0		1	3	1	3.25		
Orange, marmalade	29	0	1	0	0	2					13		
Pimiento	92	1	1	0	0	60		5					
Potato, boiled	83	0	2	0	0	0						19	
Calculated composition 5% shrink													
Moisture							49.0	42.6	54.7	*69.1	*60.6	64.3	48.5
Fat							25.6	*32.3	23.5	11.8	11.2	17.0	*33.6
Protein							13.8	15.1	13.8	13.3	12.5	15.0	12.1
Properties													
% Collagen (Max. 35)							25.9	24.6	25.9	24.6	22.0	23.0	*39.9
Bind Points (Min. 1.8)							3.1	3.0	2.9	3.0	2.3	2.5	2.2
Color Points (Min. 2)							3.1	2.8	2.8	3.4	3.0	3.6	3.6

LOAF

Average Values

Section 2 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Pork													
Backfat, cubed	5	93	1	95	0	0	5	5	5				
Tongue, cubed	63	19	17	66	8	36	5						
Trim 80 (lean)	60	23	16	25	16	25				100			
Trim 80 (lean), cubed	60	23	16	25	16	25		5	5		100	100	100
Other Meats or Mixtures or Undesignated													
Bologna meat	56	30	12	39	20	31		90					
Cooking broth	99	0	1	0	0	5		35	35	15	100	50	
Frankfurter, meat	56	26	13	25	8	20	90		90				
Dry Ingredients													
Bread crumb	7	5	13	0	15	0				11	5	10	11
Cheese, cheddar	37	32	25	0	0	1					15		25
Cracker crumbs	4	13	9	0	15	0					31		
Pistachio nut	5	54	19	0	0	0	2	2	2				
Salt	.01	0	0	0	40	0	3	3	3	0.6	2.5	2	0.6
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5	0.5				
Moist Ingredients													
Egg	74	12	13	0	0	1					11	22	
Milk	87	3	4	0	0	0		35	35				18
Oil	0	100	0	0	0	0				6			6
Rice, cooked	73	0.1	2.1	0	5	0						22	22
Water or ice	100	0	0	0	0	0				3			
Worcestershire sauce	62	1	6	0	0	90					6.7		
Fruit & Vegetables													
Celery, fresh chopped	94	0	1	0	0	0					15		
Lemon juice	91	0	1	0	0	0							0.7
Mushroom	76	3	20	0	0	0					34		
Onion	89	0	1	0	0	0	9	9		3	3.25	7.5	
Parsley, chopped	85	1	4	0	0	0					5.25		
Parsley, green	85	1	4	0	0	0							2
Calculated composition 5% shrink													
Moisture							51.7	*67.1	*67.1	56.5	*66.9	*68.3	53.9
Fat							27.7	19.9	19.2	22.4	11.1	12.9	21.7
Protein							12.0	7.9	9.1	13.4	10.6	10.5	14.2
Properties													
% Collagen (Max. 35)							27.0	32.2	21.8	22.7	12.0	18.9	16.0
Bind Points (Min. 1.8)							*0.9	*1.3	*0.7	2.1	*1.0	*1.4	*1.6
Color Points (Min. 2)							*0.3	2.0	*1.6	3.0	*1.4	2.0	2.3

LOAF

Average Values

Section 3 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
							O	P	Q	R				
Meat block														
Pork														
Trim 80 (lean), cubed	60	23	16	25	16	25	100	100	100	100				
Dry Ingredients														
Bread crumb	7	5	13	0	15	0	5							
Cracker crumbs	4	13	9	0	15	0		2						
Salt	.01	0	0	0	40	0	0.75	1	3	0.8				
Sugar, brown	2	0	0	0	0	0				5				
Moist Ingredients														
Egg	74	12	13	0	0	1	22	29	44	5.5				
Milk	87	3	4	0	0	0	25	35						
Oil	0	100	0	0	0	0				3.3				
Worcestershire sauce	62	1	6	0	0	90			6.7					
Fruit & Vegetables														
Carrot, cooked	91	0	1	0	0	20	15							
Celery, fresh chopped	94	0	1	0	0	0	12.5	16	8.7					
Mushroom soup	90	4	1	0	0	0			34					
Onion	89	0	1	0	0	0	7.5		3.25	6				
Pea, cooked	81	0	5	0	0	0	37	100						
Pimiento	92	1	1	0	0	60				2.5				
Rice, cooked	73	0.1	2.1	0	5	0		115	120					
Tomato paste	75	1	3	0	0	90				25				
Calculated composition 5% shrink														
Moisture							*69.9	*72.3	*70.1	58.3				
Fat							13.1	7.3	8.8	19.3				
Protein							10.6	7.6	8.6	12.4				
Properties														
% Collagen (Max. 35)							17.7	14.0	19.5	22.6				
Bind Points (Min. 1.8)							*1.2	*0.7	*1.4	1.8				
Color Points (Min. 2)							*1.9	*1.1	2.3	3.3				

LOAF

Average Values

Section 4 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0	1	0.5						
Spices											
Allspice	8.5	8.7	6			4	3				
Cloves	7	22	6					0.5			
Ginger	9	4	8.5		1						
Mace	8	30	7	3	2						
Maple flavor	35	0	0					1			
Mustard, prepared	80	4	5						100	53	
Onion juice	95	0	1								16
Onion powder	5	1	10							14	
Pepper, black	11	8.5	12			6	5		1.5		2
Pepper, white	11	8.5	1.3	6	6			6			
Sage	3	14	8.5	1				0.5			
Vinegar	94	0	0								112

LOAF

Average Values

Section 5 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14		
Spices											
Onion juice	95	0	1	16	12						
Pepper, black	11	8.5	12	2	1.5	2	1.5	0.75			
Pepper, white	11	8.5	13						6		

Processing Procedures

Section 6 of 8

A.

1. Cook, meat in water
2. Chop
3. Cook, vegetables until tender
4. Mix
5. Place in pan
6. Bake, 325°F

B.

1. Mix
2. Place in greased pan with
 - 150 pineapple slices)
 - 13 pounds marmalade) in bottom of pans
 - 13 pounds cranberry)
3. Bake at 350°F

LOAF

Section 7 of 8

Processing Procedures

C.

1. Soak meat in

1:1 water-vinegar
100 bay leaves
18 hrs

2. Drain
3. Grind
4. Make into loaf
5. Roll in bread crumbs
6. Place bacon over loaf
7. Bake at 350°F

D.

1. Mix
2. Chill
3. Place in loaf pans
4. Brown over high heat
5. Pressure cook, 15 pounds pressure for 25 minutes

E.

1. Grind
2. Mix
3. Mold
4. Sell fresh

F.

1. Grind
2. Chop
3. Add, cubed fat
4. Mix
5. Cure, 2 hours, 70°F
6. Bake to an internal temperature of 152°F
7. Cool

Cooking Forms

Section 8 of 8

1. Aluminum pans
2. Molds
3. Artificial casing after cooking

LOAF COATING

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Backfat	5	93	1	95	0	0	60	60	20	20			
Lard, melted	0	100	0	0	0	0					100		
Skin	40	32	28	99	6	1	40	40	80	80			
Dry Ingredients													
Gelatin	13	0	85	0	20	0	1		1		45		
Non-fat dry milk	3	1	38	0	25	0					60		
Salt	.01	0	0	0	40	0	3	3	3	3	9		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	15	15	15	15	180		
Calculated composition 7% shrink													
Moisture							23.3	23.5	36.0	36.2	54.6		
Fat							*62.0	*62.5	*39.9	*40.3	8.9		
Protein							11.4	10.8	21.2	20.6	24.3		
Properties													
% Collagen (Max. 35)							*92.4	*98.4	*95.3	*98.9	31.1		
Bind Points (Min. 1.8)							*0.8	*0.6	*1.4	*1.2	4.1		
Color Points (Min. 2)							*0.1	*0.1	*0.2	*0.2	*0.1		

LOAF COATING

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices as desired											
Allspice	8.5	8.7	6	use	use	use	use				
Cloves, oil	7	22	6	use							
Paprika	10	13	15		use						
Pimiento, powder	8	17	12			use					
Spinach, dry	9	18	1.6				use				

Processing Procedures

Section 3 of 4

- A.
1. Cook hog skin in boiling water, 1.75 hours
 2. Cook fat in boiling water, 25 minutes
 3. Chop
 4. Add scalding water and whip
 5. Stir
 6. Maximum temperature, 160°F
 7. Add, optional gelatin
 8. Cool to 100°F
 9. Dip loaves or pour into chilled pan
- B.
1. Chop, hot
 2. Steam jacket kettle, 95°F
 3. Dip loaf

Cooking Form

Section 4 of 4

1. Vat

LONGANIZA

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Trim 80 (lean)	60	23	16	25	16	25	80						
Trim 15 (fat)	11	85	3	60	3	1	20						
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	2						
Salt	.01	0	0	0	40	0	3						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	5						
Wine, sherry	85	0	0	0	0	10	1						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.6						
Calculated composition 20% shrink													
Moisture							38.3						
Fat							*39.7						
Protein							15.1						
Properties													
% Collagen (Max. 35)							26.4						
Bind Points (Min. 1.8)							2.3						
Color Points (Min. 2)							3.6						

LONGANIZA

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na or K Nitrate	0.1	0	0	1	1						
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Marjoram	4	7	11	2	2						
Paprika	10	13	15	48	40						
Pepper, black	11	8.5	12	1	1						
Pepper, red	8	17	12		8						

Processing Procedure

Section 3 of 4

A.

1. Cube, frozen fat product, 1/2"
2. Grind, meat 1/2"
3. Mix
4. Cure, 36°F, 3 days
5. Mix
6. Stuff
7. Green room, 75°F, 75% RH, 12 hours
8. Smoke, 70°F, 65% RH, 12 hours
9. Dry, 50°F, 70% RH

Small (1.4") - 15 days

Larger - longer

10. Refrigerate

Cooking Forms

Section 4 of 4

1. Medium hog casing
2. Medium beef rounds
3. Link 12"

LOUISIANA HOT SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	25	25					
Pork													
Heart	73	10	15	27	6	32	25						
Trim Reg	34	58	8	36	10	8	50	50					
Tripe	74	15	10	100	0	0		25					
Dry Ingredients													
Salt	.01	0	0	0	40	0	3	3					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	12	12					
Calculated composition 8% shrink													
Moisture							51.6	*51.8					
Fat							*33.6	*34.7					
Protein							11.6	10.4					
Properties													
% Collagen (Max. 35)							30.9	*48.1					
Bind Points (Min. 1.8)							*1.6	*1.4					
Color Points (Min. 2)							3.1	*1.9					

LOUISIANA HOT SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	0.5							
Spices											
Garlic, powder	6	1	17	1							
Nutmeg	8	33	7	4							
Pepper, red	8	17	12	8							
Sage	3	14	8.5	1							

Processing Procedure

Section 3 of 4

A.

1. Grind
2. Chop
3. Mix
4. Stuff
5. Cook to 152°F internal temperature

Cooking Form

Section 4 of 4

1. Artificial casing

LUNCHEON LOAF

Average Values

Section 1 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	40						
Trim 90 (lean)	71	11	18	28	27	43		70	45	20			
Pork													
Backfat, cubed	5	93	1	95	0	0		30	5		34	25	25
Bacon ends	19	68	12	86	1	3				20			
Shoulder	58	27	14	25	18	15					66		
Trim 80 (lean)	60	23	16	25	16	25			35	60		75	75
Trim Reg	34	58	8	36	10	8	60		10				
Dry Ingredients													
Cereal flour	12	1	10	0	18	0		6		20		4.5	
Farina	10	1	11	0	16	0					7		
Pistachio nut	5	54	19	0	0	0			2				
Rusk	5	9	14	0	16	0		20			17	15	20
Salt	.01	0	0	0	40	0	3	3	3	3	2	3	2
Sugar (sucrose)	.06	0	0	0	10	0			0.5				
Moist Ingredients													
Corn syrup	20	0	0	0	5	0	0.75						
Water or ice	100	0	0	0	0	0		30	20	20	50	21	30
Fruit & Vegetables													
Pimiento	92	1	1	0	0	60			5				
Calculated composition 5% shrink													
Moisture							42.4	49.6	*62.9	51.0	*49.5	45.0	48.2
Fat							*41.8	24.8	20.6	21.9	*30.5	*30.7	29.3
Protein							12.2	10.8	12.6	12.9	7.6	10.9	10.4
Properties													
% Collagen (Max. 35)							32.2	23.4	26.7	31.2	20.7	21.8	21.6
Bind Points (Min. 1.8)							2.2	2.6	2.7	3.6	*1.3	*1.7	*1.6
Color Points (Min. 2)							3.2	3.6	4.2	3.0	*0.8	2.2	2.1

LUNCHEON LOAF

Average Values

Section 2 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							H	I	J	K	L	
Meat block												
Pork												
Bacon ends	19	68	12	86	1	3	44					
Head meat	65	16	17	70	7	16	12					
Skin, cooked	10	18	70	99	0	0	6					
Trim 80 (lean)	60	23	16	25	16	25	38	100	100	100		
Other Meats or Mixtures or Undesignated												
Salami meat, cooked (unsalted)	56	30	12	31	8	20					100	
Dry Ingredients												
Farina	10	1	11	0	16	0	2.5	7				
Salt	.01	0	0	0	40	0	2	2.3	3	2.5	3	
Soy protein concentrate	8	0	75	0	45	0	2.5					
Sugar (sucrose)	.06	0	0	0	10	0	0.2			0.25	0.5	
Moist Ingredients												
Corn syrup	20	0	0	0	5	0			0.75			
Water or ice	100	0	0	0	0	0	19	9				
Calculated composition 5% shrink												
Moisture							44.0	56.8	55.8	56.2	51.7	
Fat							*34.8	20.5	23.3	23.6	*30.5	
Protein							16.5	14.9	16.2	16.4	12.2	
Properties												
% Collagen (Max. 35)							*58.9	23.9	25.1	25.0	31.0	
Bind Points (Min. 1.8)							*1.7	2.4	2.6	2.6	*1.0	
Color Points (Min. 2)							*1.7	3.6	4.1	4.1	2.4	

LUNCHEON LOAF

Average Values

Section 3 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.12		
Na or K Nitrate	0.1	0	0	1.5	0.5	0.5	0.5	0.5			
Spices											
Coriander	5	18	15							3	
Ginger	9	4	8.5	1.2	1						1.2
Mace	8	30	7	1.2	3.5	2			3		1.2
Nutmeg	8	33	7			1				3	5
Paprika	10	13	15						1		
Pepper, white	11	8.5	1.3	2.5	12.5	6	6		5	10	10
Sage	3	14	8.5						1		

LUNCHEON LOAF

Average Values

Section 4 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9							
Spices											
Mace				2							
Pepper, white	11	8.5	1.3	4							

Processing Procedures

Section 5 of 6

A.

1. Grind
2. Mix
3. Chop
4. Hold, 18 hours, 38°F
5. Cook to internal temperature of 150°F

B.

1. Cold smoke

Cooking Form

Section 6 of 6

1. Loaf pan

LUNCHEON MEAT

Average Values

Section 1 of 5

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Beef													
Cow F.C.	68	14	18	21	24	39	80						
Flank	43	42	13	24	12	20	20						
Trim 75	58	25	16	38	22	34		50					
Pork													
Backfat	5	93	1	95	0	0			20				
Cheek meat	67	15	17	72	9	29				15	15		
Heart	73	10	15	27	6	32				20			
Picnic	59	25	16	23	20	16			80			100	
Shank	69	9	21	55	20	25				25	40		
Tongue	63	19	17	66	8	36				20			
Trim Reg	34	58	8	36	10	8		50		20			
Trim 15 (fat)	11	85	3	60	3	1					45		
Dry Ingredients													
Salt	.01	0	0	0	40	0	3.5	3.2	3.5	3.5	3	3.2	
Sugar (sucrose)	.06	0	0	0	10	0	1	1	1	2		1	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	3			3			
Calculated composition 6% shrink													
Moisture							58.9	40.6	42.7	56.7	37.6	53.9	
Fat							19.4	*42.4	*39.3	21.5	*45.5	25.5	
Protein							16.8	12.3	13.2	15.5	12.7	16.3	
Properties													
% Collagen (Max. 35)							21.5	*37.2	24.2	*52.8	*59.1	23.0	
Bind Points (Min. 1.8)							3.7	2.2	2.6	1.9	2.0	3.3	
Color Points (Min. 2)							6.1	3.1	2.1	4.3	3.0	2.6	

LUNCHEON MEAT

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25			
Na or K Nitrate	0.1	0	0	1	1	1	1	1			
Na Erythorbate	0.1	0	0	0.87	0.87	0.87	0.87	0.87			
Spices											
Celery seed, ground	6	25	18	0.1							
Garlic, Powder	6	1	17	0.1							
Ginger	9	4	8.5		0.2	0.2	0.2				
Mace	8	30	7		0.2			0.2			
Nutmeg	8	33	7			0.2	0.2				
Onion powder	5	1	10	0.4							
Pepper, black	11	8.5	12	0.2							
Pepper, white	11	8.5	1.3		2	3.2	2	3.2			

Processing Procedures

Section 3 of 5

A.

1. Coarse grind
2. Stuff, muslin bag
3. Cook, 3-1/2 hours, 170°F
4. Dip in parafin

B.

1. Cure meat
2. Coarse grind
3. Stuff in muslin bag
4. Cook, 3-1/2 hours, 170°F
5. Cool smoke, 2 hours
6. Dip in parafin

LUNCHEON MEAT

Section 4 of 5

Processing Procedures

C.

1. Chill, meat, 34°F
2. Grind, shank tissue 1/8"
3. Grind, rest 3/16"
4. Mix
5. Cure, 34°F, 18 hours
6. Mix
7. Stuff
8. Cold smoke
9. Cook, to internal temperature of 170°F

D.

1. Chill, meat, 34°F
2. Grind, shank tissue, 1/8"
3. Grind, rest of tissue, 3/16"
4. Mix
5. Cure, 34°F, 18 hours
6. Mix
7. Stuff in can
8. Vacuum close
9. Retort

E.

1. Chill, meat, 34°F
2. Grind, shank tissue, 1/8"
3. Grind, rest of tissue, 3/16"
4. Mix
5. Cure, 36°F, 16 hours
6. Mix
7. Stuff in molds
8. Water cook to internal temperature of 155°F
9. Water chill to internal temperature of 100°F
10. Chill, 34°F

Cooking Forms

Section 5 of 5

1. Muslin bag
2. Cans
3. Molds

MACARONI AND CHEESE LOAF

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	25						
Cheek meat	70	20	18	59	14	48	7						
Cow F.C.	68	14	18	21	24	39	26	60	60				
Heart	70	13	17	27	6	40	9						
Trim 70	55	30	15	39	20	31				50	40		
Trim 65	50	35	14	39	20	31						40	
Tripe, fresh	82	10	9	100	0	0	9						
Veal													
Lean	69	10	19	27	26	30					40	40	
Pork													
Lips	71	14	15	90	1	1	12						
Snout	45	40	14	80	2	1	12						
Trim 80 (lean)	60	23	16	25	16	25		15	15				
Trim 50	36	52	10	34	12	9		25	25		20		
Trim Reg	34	58	8	36	10	8				50		20	
Other Meats or Mixtures													
Bologna meat	56	30	12	39	20	31							100
Dry Ingredients													
Caseinate	10	0	90	0	40	0		5	5				
Cereal flour	12	1	10	0	18	0		10					
Cheese, cheddar, cubed	37	32	25	0	0	1	20	10	10	10	15	15	8
Cracker meal	4	13	9	0	15	0				8			
Dextrose	.06	0	0	0	10	0	1					1	
Macaroni	10	1	12	0	15	0	6	5	5	6	5	6	4
Non-fat dry milk	3	1	38	0	25	0			10	3.5	5	12	
Salt	.01	0	0	0	40	0	4	2.75	2.75	2	3	3.5	3
Soy flour	8	1	47	0	30	0	25				5		
Sugar (sucrose)	.06	0	0	0	10	0					0.5		0.5
Moist Ingredients													
Water or ice	100	0	0	0	0	0	62	40	40		25	40	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0						0.12	
Onion	89	0	1	0	0	0					2	3	
Pimiento	92	1	1	0	0	60		5					
Tomato puree	87	0	2	0	0	70						4	
Calculated composition 5% shrink													
Moisture							62.2	59.5	58.0	34.7	53.9	55.8	48.8
Fat							11.0	16.7	17.2	*39.3	20.6	19.7	29.7
Protein							16.5	14.4	16.5	13.6	15.9	13.7	13.2
Properties													
% Collagen (Max. 35)							20.2	15.3	13.7	26.1	20.9	20.0	32.3
Bind Points (Min. 1.8)							3.2	3.2	3.7	2.0	3.1	2.5	2.3
Color Points (Min. 2)							2.6	3.0	3.1	2.2	2.9	2.3	3.4

MACARONI AND CHEESE LOAF

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H						
Other Meats or Mixtures or Undesignated													
Frankfurter, meat	56	26	13	25	8	20	100						
Dry Ingredients													
Cheese, cheddar, cubed	37	32	25	0	0	1	8						
Macaroni	10	1	12	0	15	0	4						
Salt	.01	0	0	0	40	0	3						
Sugar (sucrose)	.06	0	0	0	10	0	0.5						
Calculated composition 5% shrink													
Moisture							48.8						
Fat							26.1						
Protein							14.1						
Properties													
% Collagen (Max. 35)							21.0						
Bind Points (Min. 1.8)							*1.0						
Color Points (Min. 2)							2.4						

MACARONI AND CHEESE LOAF

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
Na or K Nitrate	0.1	0	0	1	0.5	0.5					
Na Erythorbate	0.1	0	0				0.87	0.87	0.87		
Spices											
Cardamon	8	3.5	9		2					2	
Chili pepper	8	17	12				2	2	2		
Coriander	5	18	15				3	3	3		
Garlic, Powder	6	1	17				0.5	0.5	0.5		
Mace	8	30	7			1					
Mustard seed	6	24	30				2				
Nutmeg	8	33	7					2	2		
Onion powder	5	1	10		2						
Oregano	7	10	11				1	1	1		
Paprika	10	13	15				6	6	6		
Pepper, red	8	17	12					80			
Pepper, white	11	8.5	1.3	8	7	8	6	6	6	3	

MACARONI AND CHEESE LOAF

Section 4 of 5

Processing Procedures

- A.
 - 1. Grind
 - 2. Soak, macaroni, meat, milk, spices
 - 3. Cube, cheese, 1/2"
 - 4. Mix
 - 5. Loaf pan
 - 6. Bake
- B.
 - 1. Bake, 225°F oven
 - 2. Cook 3 hrs
 - 3. To internal temperature of 150°F
- C.
 - 1. Chop to 50°F
 - 2. Add milk products
 - 3. Chop to 60°F
 - 4. Mix macaroni, cheese, red peper, pimienta
 - 5. Stuff
 - 6. Steam cook to 155°F internal temperature
- D.
 - 1. Bake, 3 hrs at 225°F
 - 2. Water cook, 3 hrs, 160°F
 - 3. Cook to internal temperature of 150°F

Cooking Forms

Section 5 of 5

- 1. Loaf pan
- 2. Artificial casing after cooking

MEATBALLS

Average Values

Section 1 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Chuck	66	16	18	30	24	38	60	60	60	50			
Flank	43	42	13	24	12	20	40	40	40	50			
Head meat	66	16	17	73	8	26							
Trim 90 (lean)	71	11	18	28	27	43					73	44	
Trim 70	55	30	15	39	20	31							76
Veal													
Lean	69	10	19	27	26	30						22	
Pork													
Trim 80 (lean)	60	23	16	25	16	25							24
Trim 50	36	52	10	34	12	9					27	34	
Dry Ingredients													
Bread crumb	7	5	13	0	15	0				13	11	5	1.2
MSG	0	0	0	0	0	0	0.2				0.05		
Non-fat dry milk	3	1	38	0	25	0	0.4	0.5	0.4		9	5	
Plant protein hydrolysate	8	0	30	0	20	0	0.04						
Salt	.01	0	0	0	40	0	0.6	0.7	0.6	2.3	0.7	1	1.5
Soy protein concentrate	8	0	75	0	45	0							6
Textured veg. protein	8	1	50	0	35	0	5	13	8				
Moist Ingredients													
Cream, light	62	31	2	0	0	0							12
Egg	74	12	13	0	0	1				5	7	7	
Water or ice	100	0	0	0	0	0	9	28	17		18	20	12
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0			0.2				
Onion	89	0	1	0	0	0						4	
Calculated composition 12% shrink													
Moisture							51.7	55.0	53.5	42.2	53.2	56.7	51.6
Fat							26.5	21.2	23.8	28.6	18.4	20.7	27.5
Protein							18.4	18.1	18.2	16.9	16.8	15.2	17.2
Properties													
% Collagen (Max. 35)							24.1	19.8	22.2	23.8	21.3	23.7	26.8
Bind Points (Min. 1.8)							4.1	4.4	4.2	3.0	3.9	3.4	4.2
Color Points (Min. 2)							5.1	4.1	4.6	4.5	4.6	4.0	3.9

MEATBALLS

Average Values

Section 2 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J				
Meat block													
Beef													
Trim 70	55	30	15	39	20	31	67						
Pork													
Picnic	59	25	16	23	20	16		100	100				
Trim 50	36	52	10	34	12	9	33						
Dry Ingredients													
Bread crumb	7	5	13	0	15	0		20	20				
Cereal flour	12	1	10	0	18	0		3	3				
MSG	0	0	0	0	0	0		0.25					
Plant protein													
hydrolysate	8	0	30	0	20	0		0.15					
Salt	.01	0	0	0	40	0	1.2	2	2				
Textured veg. protein	8	1	50	0	35	0	13						
Moist Ingredients													
Egg	74	12	13	0	0	1	8	10	10				
Milk	87	3	4	0	0	0			10				
Water or ice	100	0	0	0	0	0	13	10					
Worcestershire sauce	62	1	6	0	0	90	0.8						
Fruit & Vegetables													
Onion	89	0	1	0	0	0			10				
Calculated composition 12% shrink													
Moisture							44.2	47.5	49.2				
Fat							*32.1	21.3	20.2				
Protein							17.5	15.8	15.2				
Properties													
% Collagen (Max. 35)							24.1	18.2	17.7				
Bind Points (Min. 1.8)							3.9	2.9	2.7				
Color Points (Min. 2)							2.9	2.0	1.9				

MEATBALLS

Average Values

Section 3 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Allspice	8.5	8.7	6	0.6							
Basil	6	4	14		2						
Garlic, Powder	6	1	17			0.3	0.2				
Onion powder	5	1	10	37		3	3	40	33	15	
Oregano	7	10	11		1						
Nutmeg	8	33	7	2.3							
Parsley, dry	9	4	2	0.6	2				2.5	1	
Pepper black	11	8.5	12		1	3	1.5	1.3	0.5	1	6
Pepper, white	11	8.5	1.3	1.3							
Rosemary	9	15	5		0.2					0.2	

MEATBALLS

Average Values

Section 4 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10						
Spices											
Pepper black	11	8.5	12	1.3	0.7						

Processing Procedures

Section 5 of 6

- A.
1. Hydrate vegetable protein
 2. Grind meat
 3. Mix
 4. Shape into balls
 5. Bake
 6. Cook in mushroom soup
- B.
1. Hydrate vegetable protein
 2. Grind meat
 3. Mix
 4. Shape into balls
 5. Fry
 6. Cook in mushroom soup
- C.
1. Shape

Cooking Form

Section 6 of 6

1. Shaped

MEAT LOAF

Average Values

Section 1 of 7

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Beef													
Check meat	70	20	18	59	14	48	15						
Chuck	66	16	18	30	24	38		60	60	60	30	30	
Cow F.C.	68	14	18	21	24	39							20
Flank	43	42	13	24	12	20		40	40	40			
Trim 90 (lean)	71	11	18	28	27	43	50						
Pork													
Check meat	67	15	17	72	9	29					30	30	30
Jowl, skinned	24	71	5	43	5	2	20						
Trim 80 (lean)	60	23	16	25	16	25	15				30	30	
Trim Reg	34	58	8	36	10	8					10	10	50
Dry Ingredients													
Bread crumb	7	5	13	0	15	0		4	4	3.5			
Cereal flour	12	1	10	0	18	0	5				5		
Dextrose	.06	0	0	0	10	0					2	2	
Non-fat dry milk	3	1	38	0	25	0	10	1	1	1		10	2
Salt	.01	0	0	0	40	0	1	1	1	1	3	3	2
Semolina flour	12	1	10	0	18	0							6
Soy protein concentrate	8	0	75	0	45	0	10						2
Sugar (sucrose)	.06	0	0	0	10	0					2	2	
Textured veg. protein	8	1	50	0	35	0		14	9	4.5			
Moist Ingredients													
Egg	74	12	13	0	0	1		4.7	4.7	4.7			
Water or ice	100	0	0	0	0	0	70	28	17	9	10	15	20
Fruit & Vegetables													
Onion	89	0	1	0	0	0	5						
Parsley, chopped	85	1	4	0	0	0	0.1						
Pepper, green	93	0	1	0	0	0				0.06			
Calculated composition 5% shrink													
Moisture							65.9	56.6	55.0	54.2	56.8	55.8	51.9
Fat							13.8	18.8	21.0	23.1	19.0	17.6	29.0
Protein							14.1	16.9	16.9	16.8	14.3	15.9	12.4
Properties													
% Collagen (Max. 35)							19.1	18.3	20.4	22.7	*40.9	34.0	*37.7
Bind Points (Min. 1.8)							4.0	4.0	3.8	3.5	2.3	2.8	2.2
Color Points (Min. 2)							3.0	3.6	4.0	4.4	4.1	3.8	2.6

MEAT LOAF

Average Values

Section 2 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	18						
Trim 80	63	20	17	30	24	39		70					
Trim 75	58	25	16	38	22	34			100	100			
Trim 70	55	30	15	39	20	31					100	100	100
Veal													
Lean	69	10	19	27	26	30	47						
Pork													
Backfat	5	93	1	95	0	0	17						
Trim 50	36	52	10	34	12	9		30					
Trim Reg	34	58	8	36	10	8	18						
Dry Ingredients													
Bread crumb	7	5	13	0	15	0			20	10	9	3	2.5
Farina	10	1	11	0	16	0	6						
Gelatin	13	0	85	0	20	0	8						
Non-fat dry milk	3	1	38	0	25	0	6	4					
Peanut grit	5	48	26	0	18	0		6					
Pistachio nut, peeled & boiled in wine	10	50	17	0	0	0	0.1						
Rusk	5	9	14	0	16	0	3						
Salt	.01	0	0	0	40	0	1	1	1.1	1.4	2.8	1.25	0.6
Soy protein concentrate	8	0	75	0	45	0							
Textured veg. protein	8	1	50	0	35	0			16	15		5	7
Moist Ingredients													
Egg	74	12	13	0	0	1			15	30		7.5	6.5
Milk	87	3	4	0	0	0			28	30		5	5
Oil	0	100	0	0	0	0							9
Textured Veg. Protein, hydrated	74	0	14	0	10	0					40		
Water or ice	100	0	0	0	0	0	17	20	27	28		13	20
Worcestershire sauce	62	1	6	0	0	90					1.1		1.5
Fruit & Vegetables													
Celery, fresh chopped	94	0	1	0	0	0					6		8
Onion	89	0	1	0	0	0		0.75			7	2	8
Parsley, chopped	85	1	4	0	0	0		0.15			0.3		
Calculated composition 5% shrink													
Moisture							47.8	55.7	55.3	61.6	56.8	56.5	57.6
Fat							24.9	25.8	14.6	14.8	19.3	24.1	25.1
Protein							17.9	14.3	15.1	14.7	13.9	14.7	12.6
Properties													
% Collagen (Max. 35)							16.7	25.4	20.5	20.3	26.6	30.6	29.1
Bind Points (Min. 1.8)							4.1	3.1	3.4	3.1	2.4	3.0	2.7
Color Points (Min. 2)							3.1	3.9	2.8	2.7	3.0	3.6	3.0

MEAT LOAF

Average Values

Section 3 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
							O	P	Q	R				
Meat block														
Poultry														
Turkey														
Meat	68	7	24	18	23	19	100	100	85	80				
Skin	48	39	12	99	6	0			15	20				
Other Meats or Mixtures or Undesignated														
Cooking broth	99	0	1	0	0	5	80	60	23					
Dry Ingredients														
Bread crumb	7	5	13	0	15	0	12							
Cereal flour	12	1	10	0	18	0			14					
Gelatin	13	0	85	0	20	0		7						
MSG	0	0	0	0	0	0		0.2						
Non-fat dry milk	3	1	38	0	25	0	15							
Plant protein hydrolysate	8	0	30	0	20	0		0.2		0.15				
Rice	12	1	7	0	40	0	10							
Salt	.01	0	0	0	40	0	1	3	4.7	1				
Textured veg. protein	8	1	50	0	35	0				33				
Moist Ingredients														
Egg	74	12	13	0	0	1	20							
Oil	0	100	0	0	0	0	10							
Water, hot	100	0	0	0	0	0			16					
Fruit & Vegetables														
Onion	89	0	1	0	0	0			1					
Pimiento	92	1	1	0	0	60	7							
Calculated composition 5% shrink														
Moisture							65.3	74.0	65.3	47.0				
Fat							8.4	4.3	7.9	10.8				
Protein							14.6	19.2	15.8	29.9				
Properties														
% Collagen (Max. 35)							12.2	13.9	22.9	15.3				
Bind Points (Min. 1.8)							3.1	4.2	3.4	8.1				
Color Points (Min. 2)							*1.9	2.8	2.6	2.9				

MEAT LOAF

Average Values

Section 4 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25					
Na or K Nitrate	0.1	0	0	2	2						
Na Erythorbate	0.1	0	0			0.87					
Citric Acid	0.1	0	0				4.7	3			
Spices											
Garlic, Powder	6	1	17			0.2					
Ginger	9	4	8.5						0.7		
Mace	8	30	7						1.5		
Mustard seed, ground	6	24	30			16					
Nutmeg	8	33	7	2	2	1			3	2	
Onion powder	5	1	10	2		4					16
Parsley, dry	9	4	2								1.5
Pepper black	11	8.5	12			2					2
Pepper, white	11	8.5	1.3	5	5				8	5	
Sage	3	14	8.5	1	1	1				1	

MEAT LOAF

Average Values

Section 5 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12				
Spices											
Pepper black	11	8.5	12	4.5	2.5	1.2					
Pepper, red	8	17	12	2.5			1				
Pepper, white	11	8.5	1.3				5				
Sage	3	14	8.5				1				

Processing Procedure

Section 6 of 7

A.

1. Grind
2. Mix
3. Cure
4. Bake, 1 hour, 180°F
5. Bake, 2 hours, 250°F
6. Drain
7. Cool

Cooking Form

Section 7 of 7

1. Pans

MEATLOAF, ITALIAN

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Trim 70	55	30	15	39	20	31	50	50	50				
Veal													
Lean	69	10	19	27	26	30				50			
Pork													
Fat, caul	5	93	1	95	0	0	6						
Liver	73	7	19	24	2	49	10	10	10	10			
Trim Reg	34	58	8	36	10	8	34	40	40	40			
Dry Ingredients													
Bread crumb	7	5	13	0	15	0	10	10	10	10			
Cereal flour	12	1	10	0	18	0				3			
Cheese, cheddar	37	32	25	0	0	1	1	1		1			
Dextrose	.06	0	0	0	10	0	0.2	0.2	0.2	0.2			
Non-fat dry milk	3	1	38	0	25	0	4	4	4				
Salt	.01	0	0	0	40	0	1.25	1.25	1.25	1.25			
Sugar (sucrose)	.06	0	0	0	10	0	0.2	0.2	0.2	0.2			
Moist Ingredients													
Spaghetti, cooked	72	0	3	0	15	0	20	20	20	20			
Fruit & Vegetables													
Onion	89	0	1	0	0	0	2.5	2.5	3	3			
Pea	78	0	6	0	0	0	5						
Pimiento	92	1	1	0	0	60	40	40		40			
Spinach	91	0	3	0	0	0		10					
Tomato puree	87	0	2	0	0	70		4					
Calculated composition 5% shrink													
Moisture							*54.9	45.1	*57.7	*60.0			
Fat							24.2	*32.9	21.9	17.8			
Protein							9.5	12.2	9.3	10.3			
Properties													
% Collagen (Max. 35)							26.6	28.2	26.6	23.9			
Bind Points (Min. 1.8)							*1.4	1.9	*1.4	1.9			
Color Points (Min. 2)							2.1	2.7	2.1	2.5			

MEATLOAF, ITALIAN

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Celery seed, ground	6	25	18	0.5							
Coriander	5	18	15	1							
Garlic, Powder	6	1	17	1							
Nutmeg	8	33	7	1							
Paprika	10	13	15	6							
Pepper, white	11	8.5	1.3	7							

Processing Procedures

Section 3 of 4

A.

1. Grind
2. Mix
3. Bake, 1 hour, 180°F
4. Bake, 2 hrs, 250°F
5. Cool

B.

1. Chop meat
2. Mix
3. Place in pan lined with paper
4. Cook, 3.5 hours, 160°F
5. Chill

Cooking Form

Section 4 of 4

1. Loaf pan

MEATLOAF, SPANISH

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Heart	70	13	17	27	6	40	10						
Pork													
Cheek meat	67	15	17	72	9	29	25	25	25				
Fat, caul	5	93	1	95	0	0	15	15	15				
Heart	73	10	15	27	6	32		10	10				
Trim 80 (lean)	60	23	16	25	16	25	50	50	50				
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	5						
Dextrose	.06	0	0	0	10	0	0.2	0.2	0.2				
Non-fat dry milk	3	1	38	0	25	0		10	10				
Salt	.01	0	0	0	40	0	2.5	2.5	2.5				
Sugar (sucrose)	.06	0	0	0	10	0	0.2	0.2	0.2				
Fruit & Vegetables													
Pepper, sweet	93	0	1	0	0	0		5					
Pickle, sour	94	0	1	0	0	0		5					
Pimiento	92	1	1	0	0	60		5					
Calculated composition 5% shrink													
Moisture							48.5	51.6	46.1				
Fat							29.8	25.0	28.3				
Protein							14.2	14.7	16.5				
Properties													
% Collagen (Max. 35)							*38.9	31.4	31.7				
Bind Points (Min. 1.8)							1.8	2.2	2.5				
Color Points (Min. 2)							3.8	3.1	3.5				

MEATLOAF, SPANISH

Average Values

Section 2 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	2							
Spices											
Coriander	5	18	15	3							
Nutmeg	8	33	7	1							
Pepper, red	8	17	12	3							

Cooking Form

Section 3 of 3

1. Loaf pan

METTWURST

Average Values

Section 1 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	70	20					
Chuck	66	16	18	30	24	38			60	20			
Trim 90 (lean)	71	11	18	28	27	43					40	35	25
Vcal													
Lean	69	10	19	27	26	30	10		10				
Pork													
Backfat	5	93	1	95	0	0	20				10	15	
Butt	57	29	13	27	16	15		60					
Trim 80 (lean)	60	23	16	25	16	25				55	50	50	75
Trim Reg	34	58	8	36	10	8		20	30	25			
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0					1	1	1
Dextrose	.06	0	0	0	10	0	0.5	0.5	0.2				
Salt	.01	0	0	0	40	0	2.75	2.75	3	2.5	2.5	2.5	2.5
Sugar (sucrose)	.06	0	0	0	10	0				0.5			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	10					
Calculated composition 11% shrink													
Moisture							54.0	52.1	49.4	47.3	51.6	48.0	55.8
Fat							26.4	*30.8	*30.5	*33.1	27.4	*31.8	21.7
Protein							16.0	13.3	16.4	15.7	16.6	15.7	17.9
Properties													
% Collagen (Max. 35)							21.8	26.0	30.7	27.8	26.9	27.0	25.8
Bind Points (Min. 1.8)							4.7	2.6	3.6	2.7	3.5	3.2	3.4
Color Points (Min. 2)							7.1	3.2	5.3	4.1	5.5	5.1	5.4

METTWURST

Average Values

Section 2 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Veal													
Lean	69	10	19	27	26	30	60	50					
Pork													
Trim 80 (lean)	60	23	16	25	16	25			100	50	33		
Trim 50	36	52	10	34	12	9	40					100	
Trim Reg	34	58	8	36	10	8		50		50	34		
Trim 15 (fat)	11	85	3	60	3	1					33		
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0			1				
Dextrose	.06	0	0	0	10	0		0.5		0.5	0.7	0.7	
MSG	0	0	0	0	0	0						0.25	
Salt	.01	0	0	0	40	0	2.7	2.75	2.5	2.5	2.5	2.5	
Sugar (sucrose)	.06	0	0	0	10	0	1						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	10					
Calculated composition 11% shrink													
Moisture							52.7	48.7	52.8	38.9	25.7	26.7	
Fat							26.5	*33.7	25.0	*44.2	*60.3	*56.5	
Protein							15.2	13.4	17.4	13.1	9.8	10.9	
Properties													
% Collagen (Max. 35)							28.8	29.7	25.0	28.6	32.1	33.9	
Bind Points (Min. 1.8)							3.4	2.8	2.8	1.8	*1.2	*1.3	
Color Points (Min. 2)							3.7	3.1	4.3	2.5	*1.7	*1.0	

METTWURST

Average Values

Section 3 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.1
Na or K Nitrate	0.1	0	0	2	2	2	1				2.5
Na Erythorbate	0.1	0	0				0.87			0.87	0.87
Spices											
Allspice	8.5	8.7	6					2	2	2	4.8
Caraway seed, ground	10	15	20	1			0.5	0.5	0.5		
Celery seed, ground	6	25	18					2	2	2	
Cloves	7	22	6	0.5						1	
Coriander	5	18	15	2	4		0.5	0.5	0.5		
Garlic, Powder	6	1	17				0.1			1	
Ginger	9	4	8.5							1	
Marjoram	4	7	11					1	1	1	
Mustard seed	6	24	30	3				2			
Nutmeg	8	33	7					2	2	2	
Pepper black	11	8.5	12				4.8				
Pepper, white	11	8.5	13	6	8	8		4	4	4	
Sage	3	14	8.5	0.5							

METTWURST

Average Values

Section 4 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14		
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.1	0.1	0.1	0.1	0.1			
Na or K Nitrate	0.1	0	0	2.5	2.5	2.5	2.5	2.5	3		
Na Erythorbate	0.1	0	0	0.87	0.87	0.87	0.87				
Spices											
Caraway seed, ground	10	15	20	0.5	0.5						
Coriander	5	18	15	0.5	0.5						
Garlic, Powder	6	1	17	0.1	0.1						
Mace	8	30	7						2		
Mustard seed, ground	6	24	30			1.6	1.6				
Pepper black	11	8.5	12	4.8		4.8					
Pepper, white	11	8.5	1.3		4.8		4.8	4.8	6		

METTWURST

Section 5 of 7

Processing Procedures

If product is not cooked then certified pork should be used

A.

1. Grind
2. Mix
3. Chill, 18 hours, 36°F
4. Room temperature, 2 hrs
5. Smoke, 120°F, 1 hour
6. Cook, 165°F
7. Chill

B.

1. Grind
2. Mix
3. Cure, 72 hours, 38°F
4. Mix
5. Stuff
6. Room temperature, 3 hour
7. Cool (80°F) smoke, 18 hours
8. Hot shower
9. Hold at 50°F

C.

1. Grind, 1.5"
2. Mix
3. Regrind 3/16"
4. Cure, 24 hours, 40°F
5. Regrind, 1/8"
6. Mix in whole mustard seed
7. Stuff
8. Room temperature, 2 hours
9. Heavy smoke, 100°F, 12 hours
10. Hot water spray
11. Room temperature, 2 hrs
12. Chill, 38°F, 18 hours

D.

1. Grind
2. Mix
3. Stuff
4. Cure, 18 hours, 36°F
5. Cool smoke, 90°F
6. Chill
7. Room temperature, 3 hours
8. Store, 50°F

METTWURST

Section 6 of 7

Processing Procedures

E.

1. Grind
2. Mix
3. Stuff
4. Hold, 18 hours, 38°F
5. Room temperature, 2 hours
6. Cool smoke, 70°F, 24 hours
7. Store, 90°F, 2 hrs
8. Cool gradually

F.

1. Grind, 1/8"
2. Mix
3. Stuff
4. Smoke, 150°F, to internal temperature of 137°F
5. Water cool to internal temperature of 90°F
6. Chill, 34°F

G.

1. Defat and chill meat, 32°F
2. Grind, pork 1/2"
3. Grind, beef 1/8"
4. Mix
5. Cure, 34°F, 24 hours
6. Regrind, 1/8"
7. Stuff
8. Shower
9. Green room, 75°F, 80% RH, 3 days
10. Smoke, 48 hrs
11. Hot water dip
12. Chill, 50°F

H.

1. Defat and chill, 32°F
2. Grind, pork, 1/2"
3. Grind, beef, 1/8"
4. Mix
5. Cure, 34°F, 24 hours
6. Regrind
7. Stuff
8. Smoke, 8 hours
9. Chill, 50°F

Cooking Forms

Section 7 of 7

1. Beef rounds
2. Wide hog casing

MINCED HAM (or style)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	33						
Heart	70	13	17	27	6	40	12						
Trim 90 (lean)	71	11	18	28	27	43		25	20				
Pork													
Cheek meat	67	15	17	72	9	29	17	20	40				
Ham trim, 80, lean cured	60	23	16	25	14	20				100			
Heart	73	10	15	27	6	32		20					
Tongue	63	19	17	66	8	36		15					
Trim 80 (lean)	60	23	16	25	16	25	20		40				
Trim Reg	34	58	8	36	10	8	18	20					
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0	4						
Salt	.01	0	0	0	40	0	3	3	2.5				
Sugar (sucrose)	.06	0	0	0	10	0	0.5	1		0.5			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20	5					
Calculated composition 7% shrink													
Moisture							60.9	58.6	60.7	56.7			
Fat							19.0	22.9	18.3	24.6			
Protein							14.9	14.8	17.6	17.1			
Properties													
% Collagen (Max. 35)							29.8	*45.2	*44.7	25.0			
Bind Points (Min. 1.8)							2.9	2.0	2.7	2.4			
Color Points (Min. 2)							4.8	4.9	5.4	3.4			

MINCED HAM (or style)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.12					
Na or K Nitrate	0.1	0	0	1	1	3					
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Allspice	8.5	8.7	6	0.5	0.5						
Caraway seed, ground	10	15	20	0.25	0.25	2					
Celery, dry, ground	6	25	18				1				
Cinnamon	10	3	4				0.5				
Cloves	7	22	6				0.75				
Ginger	9	4	8.5	0.5	0.5						
Mace	8	30	7	1							
Maple extract	20	5	0				3				
Nutmeg	8	33	7		1						
Pepper black	11	8.5	12	0.2	0.2						
Pepper, white	11	8.5	1.3			7	5				

MINCED HAM (Or Style)

Section 3 of 4

Processing Procedures

- A.
 - 1. Grind
 - 2. Mix
 - 3. Stuff
 - 4. Retain
 - 5. Bake, 140-170°F, 4 hours
- B.
 - 1. Chop, beef
 - 2. Grind, pork
 - 3. Cure
- C.
 - 1. Chill, 32°F
 - 2. Grind, 1/8"
 - 3. Chop
 - 4. Mix
 - 5. Cure, 34°F, 18 hours
 - 6. Mix
 - 7. Stuff
 - 8. Dry
 - 9. Heavy smoke
 - 10. Cook to internal temperature of 155°F
 - 11. Shower
 - 12. Cool
- D.
 - 1. Chill, 32°F
 - 2. Grind, 1/8"
 - 3. Chop
 - 4. Mix
 - 5. Cure, 34°F, 18 hours
 - 6. Stuff
 - 7. Smoke
 - 8. Steam cook to internal temperature of 150°F
 - 9. Shower to internal temperature of 110°F
 - 10. Dry, 70°F
 - 11. Chill, 46°F

Cooking Forms

Section 4 of 4

- 1. Beef bung wrapped with twine
- 2. Beef bladder in wire mold
- 3. Jumbo artificial casing in stockinette
- 4. Small diameter artificial casing
- 5. Molds

MINCED LUNCHEON

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Chuck	66	16	18	30	24	38	30	30					
Pork													
Cheek meat	67	15	17	72	9	29	30	20					
Trim Reg	34	58	8	36	10	8	40	50					
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0	3						
Salt	.01	0	0	0	40	0	2	3					
Sugar (sucrose)	.06	0	0	0	10	0	0.25	0.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	18	15					
Calculated composition .5% shrink													
Moisture							55.9	52.7					
Fat							27.8	*32.7					
Protein							12.7	11.4					
Properties													
% Collagen (Max. 35)							*43.3	*42.9					
Bind Points (Min. 1.8)							2.0	1.8					
Color Points (Min. 2)							3.2	3.0					

MINCED LUNCHEON

Average Values

Section 2 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	0.5							

Cooking Form

Section 3 of 3

1. Loaf pan

MINCE MEAT

Average Values

Section 1 of 4

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Beef													
Cooked beef	63	5	31	34	16	42	67						
Fat	5	94	1	95	0	0	33	50	33				
Trim 90 (lean)	71	11	18	28	27	43		50	67				
Dry Ingredients													
Salt	.01	0	0	0	40	0	8.3	1.9	0.7				
Sugar, brown	2	0	0	0	0	0	200						
Moist Ingredients													
Brandy	65	0	0	0	0	0	6.7	50					
Molasses	24	0	0	0	18	20			8.3				
Wine, sherry	85	0	0	0	0	10		50					
Fruit & Vegetables													
Apple, fresh	85	0	0	0	0	0	166	100	37				
Cider	88	0	0	0	0	0	10		35				
Citron	80	0	1	0	0	0		25	4				
Current	85	0	2	0	0	0	53	50	4				
Lemon peel	82	0	1	0	0	1		12.5					
Lemon peel and juice	87	0	1	0	0	0	8.3	12.5					
Lemon peel, candied	17	0	1	0	0	0			4				
Orange	88	0	1	0	0	2		23					
Orange, peel, candied	17	0	0	0	0	5		12.5					
Raisin, seedless	18	0	1	0	0	0	133	100	20				
Calculated composition 10% shrink													
Moisture							*34.0	*55.5	*53.6				
Fat							5.6	10.9	20.0				
Protein							3.8	2.5	6.7				
Properties													
% Collagen (Max. 35)							31.4	24.8	28.7				
Bind Points (Min. 1.8)							*0.5	*0.4	*1.7				
Color Points (Min. 2)							*1.4	*0.8	2.7				

MINCE MEAT

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Allspice	8.5	8.7	6	0.5							
Cinnamon	10	3	4	0.5	27	12.5					
Cloves	7	22	6	0.5		6.2					
Mace	8	30	7		27	6.25					
Nutmeg	8	33	7			6					

Processing Procedures

Section 3 of 4

A.

1. Chop, meat and fat
2. Chop, fruit
3. Mix
4. Pack or stuff

B.

1. Cook, beef, cool, chop
2. Suet, shredded and chopped
3. Fruit chopped
4. Mix
5. Cover with alcohol, 3 days
6. Mix
7. Cover with muslin
8. Drain
9. Pack or stuff

Cooking Form

Section 4 of 4

1. Pan

MOCK CHICKEN

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Tripe, fresh	82	10	9	100	0	0	53	30	30				
Veal													
Lean	69	10	19	27	26	30		20	20	70	50		
Pork													
Skin	40	32	28	99	6	1						22	
Snout	45	40	14	80	2	1	10						
Trim 80 (lean)	60	23	16	25	16	25	37			30	50	40	
Trim Reg	34	58	8	36	10	8		25	25				
Tripe	74	15	10	100	0	0		25	25			38	
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	26	10	10				
Dry Ingredients													
Cereal flour	12	1	10	0	18	0		5					
Cracker meal	4	13	9	0	15	0				2			
Dextrose	.06	0	0	0	10	0		0.1	0.1				
MSG	0	0	0	0	0	0	0.2	0.25		0.2	0.15	0.15	
Non-fat dry milk	3	1	38	0	25	0			10				
Salt	.01	0	0	0	40	0	2.5	2.5	2.5	1.2	1.5	3	
Soy protein concentrate	8	0	75	0	45	0					2		
Sugar (sucrose)	.06	0	0	0	10	0		0.1	0.1				
Moist Ingredients													
Water or ice	100	0	0	0	0	0				2	7		
Fruit & Vegetables													
Parsley, green	85	1	4	0	0	0			0.12				
Calculated composition 8% shrink													
Moisture							*72.3	*61.2	58.3	61.8	61.7	55.5	
Fat							15.0	21.5	20.7	14.6	16.2	23.1	
Protein							10.4	10.7	13.2	18.9	18.7	17.2	
Properties													
% Collagen (Max. 35)							*59.9	*59.9	*46.6	26.1	24.0	*70.3	
Bind Points (Min. 1.8)							*0.8	*1.2	1.9	4.4	4.4	*1.5	
Color Points (Min. 2)							*1.3	*1.2	*1.2	5.4	4.8	*1.8	

MOCK CHICKEN

Average Values•

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Celery seed, ground	6	25	18	3	1	1	0.3				
Lemon Extract	20	5	0		1						
Mace	8	30	7		1						
Pepper black	11	8.5	12			2					
Pepper, white	11	8.5	1.3	4	4						

Processing Procedures

Section 3 of 4

A.

1. Cook meat
2. Cool
3. Grind
4. Stuff
5. Retain

B.

1. Grind
2. Mix
3. Chill, 34°F, 3 hours
4. Shape and place on stick
5. Freeze
6. Dip in breading mix

10 pounds dried bread crumbs
9.5 pounds milk
4 pounds eggs

7. Sell fresh or frozen

Cooking Form

Section 4 of 4

1. Shape and place on stick

MORTADELLA

Average Values

Section 1 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	70	34	30	30			
Fat, brisket	5	93	1	95	0	0	10						
Heart	70	13	17	27	6	40					15	15	
Trim 90 (lean)	71	11	18	28	27	43					50	50	50
Tripe, fresh	82	10	9	100	0	0					20	20	20
Pork													
Backfat	5	93	1	95	0	0			15		15		15
Fat	5	93	1	95	0	0		12					
Ham, smoked	71	7	20	24	15	18			55	55			
Heart	73	10	15	27	6	32							15
Jowl, skinned	24	71	5	43	5	2				15		15	
Trim 80 (lean)	60	23	16	25	16	25	20	54					
Dry Ingredients													
Com syrup solids	3.5	0	0	0	5	0					1	1	1
Dextrose	.06	0	0	0	10	0	1	0.25	0.25	0.25			
Gelatin	13	0	85	0	20	0	0.25		0.4	0.4			
Non-fat dry milk	3	1	38	0	25	0	4						
Pistachio nut	5	54	19	0	0	0				0.5			
Salt	.01	0	0	0	40	0	3	3.4	3	3	3.4	3.4	3.4
Sugar (sucrose)	.06	0	0	0	10	0		0.25	0.25	0.25			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	7				10	10	10
Wine, sherry	85	0	0	0	0	10	8	4					
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.06	0.06	0.06			
Calculated composition 4% shrink													
Moisture							57.2	52.6	55.6	58.2	*62.4	*65.1	*62.9
Fat							24.6	28.0	22.6	17.5	21.3	18.3	20.9
Protein							13.6	14.4	16.9	17.5	12.3	12.8	12.0
Properties													
% Collagen (Max. 35)							29.1	27.5	26.1	26.1	*38.1	*37.9	*38.5
Bind Points (Min. 1.8)							3.3	2.8	3.0	3.0	2.4	2.4	2.3
Color Points (Min. 2)							4.7	4.3	4.0	4.0	4.5	4.5	4.2

MORTADELLA

Average Values

Section 2 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	50	40					
Trim 75	58	25	16	38	22	34			40				
Trim 65	50	35	14	39	18	28				17			
Tripe, fresh	82	10	9	100	0	0	20						
Pork													
Backfat	5	93	1	95	0	0		10	10	8	10	5	
Heart	73	10	15	27	6	32	15						
Jowl, skinned	24	71	5	43	5	2	15						10
Trim 80 (lean)	60	23	16	25	16	25		40	40	75	90	95	90
Trim Reg	34	58	8	36	10	8			10				
Trim 15 (fat)	11	85	3	60	3	1		10					
Dry Ingredients													
Com syrup solids	3.5	0	0	0	5	0	1				1	1	1
Dextrose	.06	0	0	0	10	0			0.25	0.25			
Gelatin	13	0	85	0	20	0				0.4		0.25	
Non-fat dry milk	3	1	38	0	25	0						3.5	
Pistachio nut	5	54	19	0	0	0				4			
Salt	.01	0	0	0	40	0	3.4	4	3	3	3.4	3.75	3.4
Sugar (sucrose)	.06	0	0	0	10	0		0.5	0.25	0.25			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10				10	10	10
Wine, sherry	85	0	0	0	0	10						0.5	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0					0.03		
Calculated composition 4% shrink													
Moisture							*65.4	49.7	51.1	48.1	54.6	55.2	56.3
Fat							17.9	31.3	*34.5	*31.7	27.3	23.2	25.3
Protein							12.6	13.0	13.8	15.0	13.2	14.7	13.6
Properties													
% Collagen (Max. 35)							*37.9	27.9	32.2	25.9	25.5	22.9	25.5
Bind Points (Min. 1.8)							2.4	2.9	2.5	2.3	2.1	2.5	2.1
Color Points (Min. 2)							4.2	4.7	3.9	3.5	3.3	3.3	3.3

MORTADELLA

Average Values

Section 3 of 7

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							O					
Pork												
Jowl, skinned	24	71	5	43	5	2	5					
Trim 80 (lean)	60	23	16	25	16	25	95					
Dry Ingredients												
Corn syrup solids	3.5	0	0	0	5	0	1					
Gelatin	13	0	85	0	20	0	0.25					
Non-fat dry milk	3	1	38	0	25	0	3.5					
Salt	.01	0	0	0	40	0	3.75					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	10					
Wine, sherry	85	0	0	0	0	10	0.5					
Calculated composition 4% shrink												
Moisture							56.1					
Fat							22.3					
Protein							14.9					
Properties												
% Collagen (Max. 35)							23.0					
Bind Points (Min. 1.8)							2.5					
Color Points (Min. 2)							3.3					

MORTADELLA

Average Values

Section 4 of 7

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25					
Na or K Nitrate	0.1	0	0	2	2		3	3			
Na Erythorbate	0.1	0	0	0.87							
Spices											
Alcohol	66	0	0				6				
Anise seed	10	16	18					0.75	1	1	
Bay leaves	5	8	8		4						
Caraday seed	10	15	20								1
Cardamon	8	3.5	9					0.75	0.75	0.7	0.75
Celery seed	6	25	18					1			
Cinnamon	10	3	4	0.4	3	0.25					
Cloves	7	22	6		2				0.75	0.7	0.75
Coriander	5	18	15	1	2	1			2	2	2
Curacao	20	5	0				10				
Dill	7	4	20								1
Garlic Powder	6	1	17						2		2
Juniper berry	83	1	0					2	2		2
Mace	8	30	7		4	4					
Nutmeg	8	33	7					2			
Pepper black	11	8.5	12	2		3					
Pepper, white	11	8.5	1.3		7			6	6	5	6
Rum flavoring	20	5	0	2					4	4	4
Vinegar and wort	93	0	0								0.3

MORTADELLA

Section 5 of 7

Processing Procedures

A.

1. Grind, meat
2. Cube, fat
3. Mix
4. Cure, 38°F
5. Stuff
6. Hold, 24 hours
7. Steam cook to 140°F internal temperature

B.

1. Grind, meat
2. Cube, fat
3. Mix
4. Cure, 38°F
5. Stuff
6. Dried, 35-40 days

C.

1. Grind, meat
2. Cube, fat
3. Mix
4. Stuff
5. Steam cook to 140°F internal temperature

D.

1. Grind, 1/2"
2. Mix
3. Grind, 1/8"
4. Cure, 38°F, 18 hours
5. Stuff
6. Smokehouse cook to internal temperature of 155°F
7. Rinse hot water
8. Cool shower to 120°F internal temperature
9. Chill, 38°F, 18 hrs

E.

1. Freeze fat product
2. Dice, 1/4"
3. Chill, other meat, 32°F
4. Grind, pork, 3/16"
5. Grind, beef, 1/8"
6. Chop
7. Cure, 34°F, 18 hours
8. Mix with diced fat
9. Stuff
10. Wrap with twine

MORTADELLA

Section 6 of 7

Processing Procedures

E. (cont)

11. Green room, 36 hours, 70°F, 75% RH
12. Cook in smokehouse
13. Cook to internal temperature of 138°F
14. Cool, room temperature
15. Dip in hot water
16. Wrap in cheesecloth bag
17. Dry, 54°F, 70% RH
18. Moisture, 55%
19. Refrigerate, 34°F

F.

1. Grind, meat, 1/2"
2. Place spice in bag, except pepper and garlic, and add to wine
3. Heat, 200°F, 20 min.
4. Remove bag
5. Mix
6. Grind
7. Cure, 15 hours
8. Stuff
9. Cook to internal temperature of 155°F
10. Hot shower
11. Cold shower
12. Dry
13. Cool at 55°F
14. Chill at 34°F

G.

1. Dry cure, meats
2. Fine grind
3. Chop
4. Mix with cubed blanched backfat
5. Stuff
6. Cure, 24 hours
7. Slow cook to internal temperature of 140°F

Cooking Forms

Section 7 of 7

1. Beef bladder
2. Large cellulose casing
3. Beef bung cap

NEW ENGLAND LOAF

Average Values

Section 1 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	20	15					
Clod	72	7	20	25	27	42			20				
Trim 90 (lean)	71	11	18	28	27	43				30			
Trim 70	55	30	15	39	20	31		15					
Pork													
Butt	57	29	13	27	16	15	80				40	40	
Cheek meat	67	15	17	72	9	29			40		20	20	20
Shank	69	9	21	55	20	25							40
Trim 80 (lean)	60	23	16	25	16	25		70	40	70			
Trim 50	36	52	10	34	12	9					40	40	40
Dry Ingredients													
Dextrose	.06	0	0	0	10	0					2		2
MSG	0	0	0	0	0	0					0.15		
Mustard, heat treated	6	25	31	0	16	5						2	
Non-fat dry milk	3	1	38	0	25	0	4.2						
Salt	.01	0	0	0	40	0	3.5	2.5	3	2	0.75	0.75	0.75
Sugar, brown	2	0	0	0	0	0						1	1
Sugar (sucrose)	.06	0	0	0	10	0		0.4	0.5	0.4			
Moist Ingredients													
Water or ice	100	0	0	0	0	0		10	6	25	40	40	40
Calculated composition 5% shrink													
Moisture							53.1	60.7	63.9	*67.7	*61.5	*61.2	*64.6
Fat							24.7	20.6	15.9	16.0	26.1	26.3	20.1
Protein							15.6	15.3	16.5	13.7	9.3	9.7	11.6
Properties													
% Collagen (Max. 35)							22.6	26.1	*43.7	26.0	*41.3	*39.4	*53.3
Bind Points (Min. 1.8)							3.2	2.9	2.6	2.7	*1.2	*1.3	1.8
Color Points (Min. 2)							3.4	4.6	5.0	4.2	4.2	*1.6	2.5

NEW ENGLAND LOAF

Average Values

Section 2 of 6

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K			
Pork													
Cheek meat	67	15	17	72	9	29	20						
Ham, fresh	71	7	20	24	18	21		100	100				
Shank	69	9	21	55	20	25	40						
Trim 80 (lean)	60	23	16	25	16	25				75			
Trim 50	36	52	10	34	12	9	40						
Trim Reg	34	58	8	36	10	8				25			
Dry Ingredients													
Mustard, heat treated	6	25	31	0	16	5	2						
Phosphate	1	0	0	0	40	0		0.25					
Salt	.01	0	0	0	40	0	0.75	3.5	3.5	3			
Sugar, brown	2	0	0	0	0	0	1			1			
Sugar (sucrose)	.06	0	0	0	10	0		1	1.5	0.5			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	40	8	3				
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.03					
Calculated composition 5% shrink													
Moisture							*64.7	68.5	68.8	48.6			
Fat							20.4	6.5	6.8	31.9			
Protein							12.0	18.7	19.5	14.1			
Properties													
% Collagen (Max. 35)							*51.4	23.9	24.0	26.6			
Bind Points (Min. 1.8)							1.9	3.4	3.5	2.1			
Color Points (Min. 2)							2.5	3.9	4.1	3.2			

NEW ENGLAND LOAF

Average Values

Section 3 of 6

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
Na or K Nitrate	0.1	0	0	1	1	1	1	0.5			
Na Erythorbate	0.1	0	0	0.87	0.87	0.87	0.87		0.87	0.87	
Spices											
Allspice	8.5	8.7	6	0.5	0.5						
Bay leaves	5	8	8	0.5	0.1						
Cardamon	8	3.5	9					0.5	0.5		
Cassia	10	7	4	0.5	0.1						
Cinnamon	10	3	4			2					
Cloves	7	22	6	0.5	0.5						
Nutmeg	8	33	7					1	1		
Pepper, red	8	17	12	2	2						
Pepper, white	11	8.5	1.3			3		4	4	6	

Processing Procedures

Section 4 of 6

A.

1. Grind, pork, 1"
2. Grind, beef, 1/8"
3. Mix
4. Chop
5. Stuff
6. Heavy smoke
7. Cook to internal temperature of 155°F

B.

1. Grind, pork, 1/5"
2. Grind, beef, 3/16"
3. Mix
4. Stuff
5. Steam cook to 155°F internal temperature
6. Chill to 40°F
7. Chill to 28°F and slice

NEW ENGLAND LOAF

Section 5 of 6

Processing Procedures

- C.
1. Slowly cook in smokehouse to 150°F internal temperature

- D.
1. Chill, meat, 32°F
 2. Grind, shank, 1/8"
 3. Chop
 4. Cure, 18 hours, 34°F
 5. Grind rest of meat, 1"
 6. Mix
 7. Cure, 18 hours, 34°F
 8. Mix
 9. Fill can
 10. Vacuum seal
 11. Retort

- E.
1. Chill, meat 32°F
 2. Grind, shank, 1/8"
 3. Chop
 4. Cure, 16 hours, 34°F
 5. Grind rest of meat, 1"
 6. Mix
 7. Cure, 18 hours, 36°F
 8. Remix
 9. Stuff in mold
 10. Water cook to internal temperature of 155°F
 11. Water chill to internal temperature of 100°F
 12. Chill, 34°F

- F.
1. Cure, pork
 2. Grind, pork, 1"
 3. Grind, beef, 3/8"
 4. Chop beef
 5. Mix
 6. Stuff
 7. Smokehouse cook to internal temperature of 155°F

Cooking Forms

Section 6 of 6

1. Fibrous casing
2. Molds
3. Can
4. Beef bungs
5. Cellulose casing

OLD FASHION LOAF (Dutch Loaf)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							A	B	C	D	E	F
Meat block												
Beef												
Plate	41	40	18	42	16	25	25					
Trim 80	63	20	17	30	24	39		65				
Trim 75	58	25	16	38	22	34			65			
Veal												
Lean	69	10	19	27	26	30				35	35	35
Pork												
Bacon ends	19	68	12	86	1	3				10		
Butt	57	29	13	27	16	15	75					
Cheek meat	67	15	17	72	9	29					40	10
Liver	73	7	19	24	2	49				5		5
Trim 80 (lean)	60	23	16	25	16	25				50		50
Trim 50	36	52	10	34	12	9		35			25	
Trim Reg	34	58	8	36	10	8			35			
Dry Ingredients												
Hydrolyzed Veg.												
Protein (HVP)	10	0	31	0	20	0		0.2			0.25	
MSG	0	0	0	0	0	0		0.25		0.25		
Non-fat dry milk	3	1	38	0	25	0	3.5	3.5	3.5		10	
Salt	.01	0	0	0	40	0	2.75	2.6	2.6	3	3	3
Soy flour	8	1	47	0	30	0				4		4
Soy protein concentrate	8	0	75	0	45	0	2					
Sugar (sucrose)	.06	0	0	0	10	0		1				
Moist Ingredients												
Corn syrup	20	0	0	0	5	0	2					
Water or ice	100	0	0	0	0	0	15	20	15		25	
Fruit & Vegetables												
Celery, fresh ground	94	0	1	0	0	0	0.2		0.2	0.2		
Onion	89	0	1	0	0	0		4			4	
Calculated composition 5% shrink												
Moisture							52.5	56.5	51.1	53.7	60.5	58.5
Fat							26.7	25.0	*31.7	21.7	16.7	16.6
Protein							14.3	12.8	12.6	18.3	14.7	18.9
Properties												
% Collagen (Max. 35)							26.5	28.2	34.1	27.1	*38.0	27.4
Bind Points (Min. 1.8)							2.8	2.7	2.7	3.5	2.7	3.7
Color Points (Min. 2)							2.2	3.7	3.3	4.4	3.1	4.9

OLD FASHION LOAF (Dutch Loaf)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.2					
Na or K Nitrate	0.1	0	0	0.5							
Na Erythorbate	0.1	0	0			0.87					
Spices											
Celery seed ground	6	25	18		3	3					
Coriander	5	18	15		1						
Onion powder	5	1	10		4	12					
Pepper, white	11	8.5	1.3	8	4	5					
Sage	3	14	8.5	2							

Processing Procedures

Section 3 of 4

A.

1. Grind, 3/16"
2. Mix
3. Stuff
4. Bake, 8 hours, 170°F to internal temperature of 152°F
5. Water chill to internal temperature of 90°F
6. Chill, 34°F

B.

1. Bake, 250°F to internal temperature of 160°F

Cooking Form

Section 4 of 4

1. Loaf pans

OLIVE LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
							A	B	C	D				
Meat block														
Beef														
Bull F.C.	70	10	20	20	30	47	60							
Cow F.C.	68	14	18	21	24	39		60						
Veal														
Lean	69	10	19	27	26	30			35					
Pork														
Trim 50	36	52	10	34	12	9	25	25						
Trim Reg	34	58	8	36	10	8	15	15	50					
Poultry														
Chicken														
Meat	57	25	17	18	23	19			15					
Other Meats or Mixtures or Undesignated														
Bologna meat	56	30	12	39	20	31				100				
Dry Ingredients														
Caseinate	10	0	90	0	40	0	5	5						
Cereal flour	12	1	10	0	18	0	10							
Non-fat dry milk	3	1	38	0	25	0		10	7.5					
Salt	.01	0	0	0	40	0	2.7	2.7	3.3	3				
Sugar (sucrose)	.06	0	0	0	10	0			1	0.5				
Moist Ingredients														
Water or ice	100	0	0	0	0	0	40	40	15					
Fruit & Vegetables														
Olive	78	13	1	0	0	0	15	15	5	8.5				
Calculated composition 6% shrink														
Moisture							63.5	59.8	49.2	53.1				
Fat							18.3	19.8	29.8	29.5				
Protein							14.3	14.1	12.9	11.5				
Properties														
% Collagen (Max. 35)							15.9	15.5	23.1	38.7				
Bind Points (Min. 1.8)							3.7	3.5	2.8	2.3				
Color Points (Min. 2)							4.9	1.8	2.3	3.5				

OLIVE LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25					
Na or K Nitrate	0.1	0	0	0.5	0.4						
Na Erythorbate	0.1	0	0			0.87					
Spices											
Celery, dry, ground	6	25	18	2							
Chili pepper	8	17	12			2					
Coriander	5	18	15		2	3					
Garlic, Powder	6	1	17		0.4	0.5					
Mace	8	30	7	2							
Nutmeg	8	33	7		1.5	2					
Oregano	7	10	11			1					
Paprika	10	13	15			6					
Pepper, white	11	8.5	1.3	6	5	6					

Processing Procedures

Section 3 of 4

- A.
1. Grind, meat, 3/8"
 2. Mix, olives
 3. Stuff
 4. Bake at 250°F to internal temperature of 152°F
- B.
1. Chop to 50°F
 2. Add milk products
 3. Chop to 60°F
 4. Mix olives with 0.75 lbs salt
 5. Mix
 6. Stuff
 7. Steam cook to 155°F internal temperature

Cooking Forms

Section 4 of 4

1. Pans
2. Molds

PASTRAMI

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Brisket	65	15	18	40	12	19	100						
Clod	72	7	20	25	27	42		100					
Plate	41	40	18	42	16	25			100				
Round	73	5	21	20	27	45				100			
Trim 85	66	15	18	28	26	41					100		
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	1.5		1.5				
Salt	.01	0	0	0	40	0	6.2	5	6.2	5	5		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	50		50				
Calculated composition	% shrink						5	15	5	15	15		
Moisture							*71.5	63.0	55.5	64.1	56.3		
Fat							10.0	7.8	26.7	5.6	16.8		
Protein							12.0	22.4	12.0	23.5	20.2		
Properties													
% Collagen (Max. 35)							*40.0	25.0	*42.0	20.0	28.0		
Bind Points (Min. 1.8)							*1.4	6.1	1.9	6.4	5.2		
Color Points (Min. 2)							2.3	9.4	3.0	10.6	8.3		

PASTRAMI

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Cure Type				Brine	Brine	Dry					
Curing Ingredients											
Na or K Nitrite	0.1	0	0	1.25	1.25						
Na or K Nitrate	0.1	0	0			40					
Spices											
Allspice	8.5	8.7	6			use					
Coriander	5	18	15	use		use					
Garlic juice	95	0	1	1.5	1.5						
Garlic, Powder	6	1	17			use					
Paprika	10	13	15		use						
Pepper black	11	8.5	12	use		use					
Pepper, white	11	8.5	13			use					

PASTRAMI

Section 3 of 4

Processing Procedures

- A.
1. Mix dry ingredients in water
 2. Pump, 15% green weight
 3. Place in vat and cover with brine
 4. Cure, 4 days, 40°F
 5. Rub with black pepper and coriander
 6. Light smoke
 7. Cook to internal temperature of 175°F
 8. Cool, room temperature, 2 hours
 9. Chill, 38°F, 18 hours
- B.
1. Mix dry ingredients in water
 2. Pump, 15% green weight
 3. Place in vat and cover with brine
 4. Cure, 4 days, 40°F
 5. Rub with paprika
 6. Light smoke
 7. Cook to internal temperature of 175°F
 8. Cool, room temperature, 2 hours
 9. Chill, 38°F, 18 hours
- C.
1. Dry cure with black pepper, garlic, and curing ingredients
 2. If brine after 24 hrs, does not cover meat add 65° pickle
 3. Cure, 60 days, 38°F
 4. Rub with
 - 65% black pepper
 - 35% allspiceor
 - 60% coriander
 - 25% allspice
 - 15% white pepper
 - and garlic flour
 5. Bake, 320°F, 7 hours

Cooking Form

Section 4 of 4

1. Hang

PATTY

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Beef													
Veal													
Lean	69	10	19	27	26	30	100						
Pork													
Trim 80 (lean)	60	23	16	25	16	25		100					
Dry Ingredients													
MSG	0	0	0	0	0	0	0.25	0.25					
Salt	.01	0	0	0	40	0	1.5	1.5					
Soy protein concentrate	8	0	75	0	45	0	3	2					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	8						
Calculated composition +3%													
Moisture							69.42	59.20					
Fat							9.1	22.8					
Protein							19.4	17.4					
Properties													
% Collagen (Max. 35)							24.2	22.8					
Bind Points (Min. 1.8)							5.4	3.2					
Color Points (Min. 2)							5.2	3.9					

PATTY

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Spices											
Caraway seed, ground	10	15	20	3	2						
Pepper, white	11	8.5	1.3	4	4						

Processing Procedures

Section 3 of 4

A.

1. Breeding mix

10 lbs. dried bread crumbs
8 lbs. milk
4 lbs. eggs

B.

1. Breeding mix

10 lbs. dried bread crumbs
9 lbs. milk
6.5 lbs. eggs

C.

1. Grind, 1/4"
2. Mix
3. Form patties
4. Dip or roll in breading
5. Sell fresh or frozen

Cooking Form

Section 4 of 4

1. Formed

PEMMICAN

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							A	B	C	D		
Meat block												
Beef												
Jerky	34	7	53	21	20	50	100	100	100	100		
Suet, rendered	0	100	0	0	0	0	50	50				
Other Meats or Mixtures or Undesignated												
Bone, marrow fat	0	100	0	0	0	0			50	50		
Fruit & Vegetables												
Fruit, dried	22	1	2	0	0	0	50		50			
Raisin, seedless	18	0	1	0	0	0		50		50		
Calculated composition 2% shrink												
Moisture							20.9	19.9	20.9	19.9		
Fat							29.3	29.1	29.3	29.1		
Protein							27.5	27.3	27.5	27.3		
Properties												
% Collagen (Max. 35)							20.6	20.8	20.6	20.8		
Bind Points (Min. 1.8)							5.4	5.4	5.4	5.4		
Color Points (Min. 2)							13.5	13.5	13.5	13.5		

Processing Procedure

Section 2 of 3

- A.
1. Grind
 2. Mix
 3. Stuff
 4. Store, cool place

Cooking Forms

Section 3 of 3

1. Cloth bag
2. Paper bag

PEPPER LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A	B	C	D	E	F
Beef												
Bull F.C.	70	10	20	20	30	47	20	20				
Plate	41	40	18	42	16	25			25			
Trim 90 (lean)	71	11	18	28	27	43				70	20	20
Veal												
Lean	69	10	19	27	26	30				15		
Pork												
Butt	57	29	13	27	16	15	80		75		80	
Trim 80 (lean)	60	23	16	25	16	25		80				80
Trim Reg	34	58	8	36	10	8				15		
Dry Ingredients												
Cereal flour	12	1	10	0	18	0	2.5	2.5			2.5	2.5
Corn syrup solids	3.5	0	0	0	5	0	2	2			2	2
MSG	0	0	0	0	0	0				0.1		0.1
Non-fat dry milk	3	1	38	0	25	0			3.5	5		
Salt	.01	0	0	0	40	0	3	3	2.75	2.5	3	3
Soy protein concentrate	8	0	75	0	45	0	2	2	2		2	2
Sugar (sucrose)	.06	0	0	0	10	0				0.5		
Moist Ingredients												
Corn syrup	20	0	0	0	5	0			2			
Water or ice	100	0	0	0	0	0	20	20	15	10	20	20
Calculated composition 5% shrink												
Moisture							59.9	61.8	50.9	61.9	60.0	61.9
Fat							20.5	16.6	26.7	15.9	20.6	16.7
Protein							13.1	15.0	14.3	16.5	12.8	14.7
Properties												
% Collagen (Max. 35)							22.4	21.7	26.6	25.5	24.2	23.3
Bind Points (Min. 1.8)							2.9	3.2	2.8	4.2	2.7	3.0
Color Points (Min. 2)							2.8	4.1	2.2	5.7	2.5	3.9

PEPPER LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1	2	3				
Curing Ingredients										
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25				
Na or K Nitrate	0.1	0	0	1	0.5					
Na Erythorbate	0.1	0	0	0.87						
Spices										
Celery seed, ground	6	25	18			3				
Coriander	5	18	15			1				
Garlic, Powder	6	1	17		1					
Mustard seed, ground	6	24	30		1					
Onion powder	5	1	10			4				
Pepper black	11	8.5	12		4					
Pepper, black, cracked	9	9	11	6	7	use				
Pepper, white	11	8.5	1.3			4				

PEPPER LOAF

Section 3 of 4

Processing Procedures

- A.
 - 1. Grind, 3/16"
 - 2. Mix
 - 3. Stuff
 - 4. Sprinkle black pepper on loaves
 - 5. Bake, 8 hours at 170°F to internal temperature of 152°F
- B.
 - 1. Grind, 3/16"
 - 2. Mix
 - 3. Stuff
 - 4. Sprinkle, crush black pepper on loaves
 - 5. Bake to internal temperature of 160°F
- C.
 - 1. Chill, meat, 32°F
 - 2. Grind, beef, 1/8"
 - 3. Grind, pork, 1/2"
 - 4. Chop
 - 5. Mix
 - 6. Cure, 36°F, 18 hours
 - 7. Mix
 - 8. Place in pan
 - 9. Sprinkle, crushed black pepper on loaves
 - 10. Bake to internal temperature of 155°F
 - 11. Cool
 - 12. Chill

Cooking Form

Section 4 of 4

- 1. Pans

PEPPERONI

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Bull F.C.	70	10	20	20	30	47	50	50	40	40			
Cheek meat	70	20	18	59	14	48	20	20	40	40	40	40	20
Cow F.C.	68	14	18	21	24	39					40	40	50
Flank	43	42	13	24	12	20	30		20		20		30
Plate	41	40	18	42	16	25		30		20		20	
Dry Ingredients													
Salt	.01	0	0	0	40	0	3.5	3.5	3.5	3.5	3.4	3.4	3.4
Sugar (sucrose)	.06	0	0	0	10	0	0.4	0.4	0.4	0.4	0.25	0.25	0.25
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	10	10	10	10	10	10
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0			0.03	0.03			
Calculated composition 25% shrink													
Moisture							55.1	50.1	54.0	42.99	53.2	52.77	49.8
Fat							25.3	24.6	26.5	23.4	25.8	25.3	27.5
Protein							20.5	22.2	20.8	22.3	19.9	21.1	19.3
Properties													
% Collagen (Max. 35)							28.9	33.7	*36.4	*38.6	*37.6	*40.4	30.1
Bind Points (Min. 1.8)							4.6	5.1	4.4	4.7	3.6	3.9	3.7
Color Points (Min. 2)							8.4	9.1	9.1	9.5	7.9	7.9	7.1

PEPPERONI

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							H	I	J	K	L	M
Meat block												
Beef												
Cheek meat	70	20	18	59	14	48	20					
Chuck	66	16	18	30	24	38		30	30	30		
Cow F.C.	68	14	18	21	24	39	50					
Plate	41	40	18	42	16	25	30					
Trim 90 (lean)	71	11	18	28	27	43					50	
Pork												
Butt	57	29	13	27	16	15		70				50
Trim 80 (lean)	60	23	16	25	16	25			50	50	50	
Trim Reg	34	58	8	36	10	8			20	20		10
Dry Ingredients												
Dextrose	.06	0	0	0	10	0			0.1			
Salt	.01	0	0	0	40	0	3.4	3.1	3.4	3.4	3.6	3.5
Sugar (sucrose)	.06	0	0	0	10	0	0.25	0.25	0.1	0.25	0.6	0.4
Moist Ingredients												
Water or ice	100	0	0	0	0	0	10					10
Fruit & Vegetables												
Garlic, fresh	61	0	6	0	0	0			0.03			
Calculated composition 25% shrink												
Moisture							49.1	43.7	39.5	39.5	50.5	42.3
Fat							27.0	*32.4	*35.9	*35.9	21.8	*36.6
Protein							21.1	18.7	19.3	19.3	21.8	13.2
Properties												
% Collagen (Max. 35)							34.9	28.1	28.0	28.0	26.6	28.0
Bind Points (Min. 1.8)							4.1	3.6	3.5	3.5	4.8	2.0
Color Points (Min. 2)							7.7	4.4	5.4	5.4	7.5	*1.9

PEPPERONI

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6		
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.1			
Na or K Nitrate	0.1	0	0	3.7	1	1		2	3		
Spices											
Allspice	8.5	8.7	6	2				2			
Anise seed	10	16	18	5			3	1	4		
Garlic, Powder	6	1	17		0.2		1	0.3			
Paprika	10	13	15				4.5				
Pepper black	11	8.5	12		3.2	3.2		0.25			
Pepper, red	8	17	12	2			5	2	8		
Pimiento, powder	8	17	12				2		8		

PEPPERONI

Section 4 of 5

Processing Procedures

A.

1. Coarse cut
2. Mix
3. Cure, 38°F, 2 days
4. Remix
5. Stuff
6. Green room, 24 hours
7. Dry room, 46-53°F, RH 55-65%
1-3/8" diameter - 15 days
larger than 1-3/8" - 21-28 days

B.

1. Grind, 1/2"
2. Mix
3. Grind, 3/16"
4. Stuff
5. Hold, 90°F, 50% RH, 1 week
6. Smoke
7. Place in cooler with sufficient air movement for 21 days

C.

1. Grind, 3/16"
2. Mix
3. Grind, 1/8"
4. Chill, 32°F
5. Stuff
6. Dry
7. Smoke
8. Cook (beef only, 130°F)
(pork 138°F) internal temperature
9. Cool water, chill to 110°F internal temperature
10. Dry
11. Green room, 60°F, 70% RH, 4 days, 50% yield
12. For 1-3/8" diameter casing, 70°F, 75% RH, 2 days
13. Cooler, 20 days

Cooking Forms

Section 5 of 5

1. A 32-35 mm Hog casing
2. A 24-26 mm sheep casing
3. Link in pairs, 12"

PICKLE (Brine)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Dry Ingredients													
MSG	0	0	0	0	0	0	1.1	1.1					
Phosphate	1	0	0	0	40	0	30	25					
Salt	.01	0	0	0	40	0	150	150					
Sugar (sucrose)	.06	0	0	0	10	0	62.5	62.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	850	850					
Calculated composition 0% shrink													
Moisture							*77.8	*78.1					
Fat							0	0					
Protein							0	0					

PICKLE (Brine)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	32							
Na or K Nitrate	0.1	0	0	32							
Na Ascorbate	0.1	0	0	84.4							

Processing Procedure

Section 3 of 4

- A. Pump 110-115 %
- B. Mold in cover pickle
- C. Cover pickle slightly less salt than pumping pickle

Mixing Form

Section 4 of 4

- 1. Vat

PICKLE AND PIMIENTO LOAF

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	65	60	15	15			
Cheek meat	70	20	18	59	14	48					10		
Chuck	66	16	18	30	24	38						50	
Cow F.C.	68	14	18	21	24	39							60
Trim 90 (lean)	71	11	18	28	27	43					30		
Trim 70	55	30	15	39	20	31			35	35			
Veal													
Lean	69	10	19	27	26	30			25	25			
Pork													
Cheek meat	67	15	17	72	9	29						50	
Trim 50	36	52	10	34	12	9		25					25
Trim Reg	34	58	8	36	10	8	35	15	25	25	60		15
Dry Ingredients													
Cascinate	10	0	90	0	40	0		5					5
Cereal flour	12	1	10	0	18	0	5						
Corn flour	29	21	8	0	18	0		10					
Corn syrup solids	3.5	0	0	0	5	0	2				2		
Dextrose	.06	0	0	0	10	0			1		1.5		
MSG	0	0	0	0	0	0							0.15
Non-fat dry milk	3	1	38	0	25	0	5		12	12	6	5	10
Salt	.01	0	0	0	40	0	3	2.7	5	3	3.2	3	2.7
Soy flour	8	1	47	0	30	0						5	
Soy protein concentrate	8	0	75	0	45	0	2						
Sugar (sucrose)	.06	0	0	0	10	0				0.5		0.5	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	50	40	45	35	32	25	40
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0							
Onion	89	0	1	0	0	0				5			
Pickle, sweet	61	1	1	0	0	0	8	10	5	5	8	5	10
Pimiento	92	1	1	0	0	60	3	10	6	6	8	5	10
Calculated composition 5% shrink													
Moisture							*63.3	57.0	*60.9	*60.4	*55.8	65.4	60.4
Fat							16.0	17.8	17.7	18.5	26.9	11.1	17.9
Protein							11.7	12.5	11.9	12.5	9.4	15.5	13.8
Properties													
% Collagen (Max. 35)							18.2	17.4	23.6	23.5	29.9	*40.3	15.2
Bind Points (Min. 1.8)							3.2	3.5	2.7	2.9	1.8	2.9	3.4
Color Points (Min. 2)							3.8	3.6	2.8	2.9	2.4	4.2	2.7

PICKLE AND PIMIENTO LOAF

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Heart	70	13	17	27	6	40	10						
Plate	41	40	18	42	16	25		10					
Trim 90 (lean)	71	11	18	28	27	43	30	30	65	60	30		
Trim 75	58	25	16	38	22	34						60	
Pork													
Defatted solids	10	3	86	95	0	0		10					
Head meat	65	16	17	70	7	16					10		
Trim 50	36	52	10	34	12	9				25			
Trim Reg	34	58	8	36	10	8	60	50	35	15	60	40	
Other Meats or Mixtures or Undesignated													
Bologna meat	56	30	12	39	20	31							100
Dry Ingredients													
Cascinate	10	0	90	0	40	0				5			
Cereal flour	12	1	10	0	18	0			5				
Corn syrup solids	3.5	0	0	0	5	0	2		2		2		
Dextrose	.06	0	0	0	10	0	1.5				1.5		
MSG	0	0	0	0	0	0				0.2			
Mustard, heat treated	6	25	31	0	16	5				1			
Non-fat dry milk	3	1	38	0	25	0	6		5	10	6	3.5	
Salt	.01	0	0	0	40	0	3.2	3.5	3	2.2	3.2	2.6	3
Soy protein concentrate	8	0	75	0	45	0			2				
Sugar (sucrose)	.06	0	0	0	10	0							0.5
Textured veg. protein	8	1	50	0	35	0		12					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	32		50	40	32	15	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.06						
Onion	89	0	1	0	0	0					5		
Pepper, sweet	93	0	1	0	0	0				10			
Pickle, sweet	61	1	1	0	0	0	8	10	8	10	8	3	5
Pimiento	92	1	1	0	0	60	8	10	3		8	3	4
Calculated composition 5% shrink													
Moisture							*55.8	41.1	*63.7	61.4	*56.4	51.1	53.4
Fat							25.9	28.7	16.4	16.9	25.4	*31.7	28.2
Protein							9.4	20.2	10.9	13.7	9.1	11.8	11.3
Properties													
% Collagen (Max. 35)							25.8	*45.7	23.1	18.5	30.8	33.8	*38.7
Bind Points (Min. 1.8)							*1.7	3.3	2.8	3.6	*1.7	2.5	2.3
Color Points (Min. 2)							2.3	2.5	3.1	2.9	*1.9	2.9	3.5

PICKLE AND PIMIENTO LOAF

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.2	
Na or K Nitrate	0.1	0	0	1	1	0.5	0.5				
Na Erythorbate	0.1	0	0	0.87				0.87	0.87	0.87	
Spices											
Allspice	8.5	8.7	6					2		2	
Cardamon	8	3.5	9					0.5			
Celery, dry, ground	6	25	18					2		2	
Chili pepper	8	17	12					0.5	2		
Coriander	5	18	15			2		1	2		
Garlic, Powder	6	1	17	0.1					0.5		
Ginger	9	4	8.5	1			1				
Mace	8	30	7	1			2				
Marjoram	4	7	11		1	0.5					
Nutmeg	8	33	7						2		
Onion powder	5	1	10	2				2		4	
Oregano	7	10	11						1		
Paprika	10	13	15	4				4	6		
Pepper black	11	8.5	12				6				
Pepper, red	8	17	12	1							
Pepper, white	11	8.5	1.3		8	6		3	6	4	

PICKLE AND PIMIENTO LOAF

Section 4 of 5

Processing Procedures

- A.
 - 1. Bake, 250°F oven, 3 hours
 - 2. Cook to internal temperature of 150°F
- B.
 - 1. Water cook, 160°F, 3 hours
 - 2. Cook to internal temperature of 150°F
 - 3. Cold water chill to internal temperature of 90°F
 - 4. Chill, 34°F
- C.
 - 1. Chop to 50°F
 - 2. Add milk products
 - 3. Chop to 60°F
 - 4. Mix pickles and pimientos
 - 5. Stuff
 - 6. Steam cook to 155°F internal temperature
 - 7. Water cool to internal temperature of 70°F
 - 8. Chill, 34°F

Cooking Forms

Section 5 of 5

- 1. Molds
- 2. Loaf pans
- 3. Artificial casing after cooking

PICKLED PIG FEET

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Pork													
Feet meat	67	15	17	55	20	20	use	100					
Dry Ingredients													
Salt	.01	0	0	0	40	0	use	50					
Moist Ingredients													
Water or ice	100	0	0	0	0	0		450					
% Pump							dry	20					
Calculated composition 0% shrink													
Moisture								70.8					
Fat								2.8					
Protein								2.8					

PICKLED PIG FEET

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	16	16						
Spices											
Vinegar, 35 gr	94	0	0	use	use						
Vinegar, 45 gr	0	0	0	use							

Processing Procedures

Section 3 of 4

A.

1. Clean feet
2. Boil till tender
3. Remove bones
4. Chop meat
5. Add to cooking broth
6. Salt to taste
7. Vinegar to taste
8. Cool
9. Cut into slices

B.

1. Clean feet
2. Cure in hot pickle, 18 hours
3. Cook until tender
4. Hot water rinse
5. Cold water chill
6. Place in 35 grain vinegar, 18 hours
7. Place in jars
8. Pour vinegar solution over meat

C.

1. Vinegar solution for jars

45 grain vinegar (3.6% acetic acid)
10 pounds salt
5 ounces ascorbic acid

Storage Form

Section 4 of 4

1. Cooked slices
2. Jar

PICKLE LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r		Pounds for Various Formulations					
Meat block							A						
Beef													
Veal													
Lean	69	10	19	27	26	30	35						
Pork													
Trim Reg	34	58	8	36	10	8	50						
Poultry													
Chicken													
Stewing hen	70	7	21	18	24	20	15						
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0	7.5						
Salt	.01	0	0	0	40	0	3.3						
Sugar (sucrose)	.06	0	0	0	10	0	1						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	15						
Fruit & Vegetables													
Pickle, sweet	61	1	1	0	0	0	7.5						
Calculated composition 5% shrink													
Moisture							50.7						
Fat							26.4						
Protein							13.1						
Properties													
% Collagen (Max. 35)							22.8						
Bind Points (Min. 1.8)							2.8						
Color Points (Min. 2)							2.3						

PICKLE LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	0.4							
Spices											
Coriander	5	18	15	2							
Garlic Powder	6	1	17	0.4							
Nutmeg	8	33	7	1.5							
Pepper, white	11	8.5	1.3	5							

Processing Procedure

Section 3 of 4

A.

1. Grind, meat
2. Mix, diced pickles
3. Stuff
4. Bake, 250°F to internal temperature of 152°F

Cooking Form

Section 4 of 4

1. Pans

PICNIC

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Pork													
Picnic	59	25	16	23	20	16	100	100					
Dry Ingredients													
Phosphate	1	0	0	0	40	0	0.5						
Salt	.01	0	0	0	40	0	6.2	8.5					
Sugar (sucrose)	.06	0	0	0	10	0	2	1.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	85	46.7					
% Pump							12	10					
Calculated composition 5% shrink													
Moisture							*60.4	*59.0					
Fat							13.6	16.8					
Protein							8.4	10.7					
Properties													
% Collagen (Max. 35)							23.8	23.1					
Bind Points (Min. 1.8)							*1.7	2.1					
Color Points (Min. 2)							*1.4	*1.7					

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per brine						
				1	2					
Curing Ingredients										
Na or K Nitrite	0.1	0	0	1.5	1					
Na Erythorbate	0.1	0	0		4					

PICNIC

Section 3 of 4

Processing Procedures

A.

1. Mix, dry ingredients in water
2. Chill, picnic to 38°F
3. Pump, 10%
4. Rub, 5 pounds of additional dry ingredients
5. Stack, Maximum 4 deep
6. Cure, 6 day, 38°F
7. Shower
8. Stockinette
9. Smoke, slow
10. Cook, 142°F internal temperature
11. Fully cook, 155°F internal temperature

B.

1. Mix, dry ingredients in water
2. Chill picnic, 38°F
3. Pump, 10%
4. Place in vat and cover with brine
5. Cure, 38°F, 6 days
6. Shower
7. Stockinette
8. Slow smoke
9. Cook, 142°F internal temperature
10. Fully cook, 155°F internal temperature

C.

1. Pump, 12%
2. Cure, 1 week, 34°F
3. Smoke
4. Cook to internal temperature of 140°F
5. Water cool to 90°F internal temperature
6. Chill, 34°F

Cooking Forms

Section 4 of 4

1. Stockinette
2. Hang

PIG FEET, JELLIED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Pork													
Feet, meat	67	15	17	55	20	20	100	100					
Dry Ingredients													
Gelatin	13	0	85	0	20	0	1.8	1					
Salt	.01	0	0	0	40	0	3.6	0.1					
Sugar (sucrose)	.06	0	0	0	10	0	0.25	0.25					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	3	6					
Calculated composition 12% shrink													
Moisture							59.5	63.8					
Fat							15.7	15.9					
Protein							19.4	18.9					
Properties													
% Collagen (Max. 35)							*50.4	*52.4					
Bind Points (Min. 1.8)							3.9	3.8					
Color Points (Min. 2)							3.6	3.6					

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat									
				1	2								
Spices													
Bay leaves	5	8	8	0.7									
Pepper, black, whole	12	9	11	0.7									
Pepper, red	8	17	12		0.2								
Pepper, white	11	8.5	1.3		6								
Vinegar, 90 gram	94	0	0	70	16								

PIG FEET, JELLIED

Processing Procedures

Section 3 of 4

A.

1. Place in kettle
2. Cover with water
3. Cook at 185°F till tender, 3.2 hrs
4. Skim off fat
5. Chill
6. Bone and cube
7. Place in pan
8. Cover with vinegar solution

B.

1. Vinegar solution

4.4 pounds 90 grain vinegar
3.3 pounds strained cooking broth
3 pounds water
1.8 pounds gelatin
4 ounces sugar

C.

1. Cook feet
2. Remove bones
3. Grind
4. Stuff
5. Pour in gelatin mix
6. Cook to internal temperature of 160°F for 15 min
7. Chill in cold water

Cooking Forms

Section 4 of 4

1. Pan
2. Artificial casing

PIMIENTO LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
							A	B	C	D				
Meat block														
Beef														
Bull F.C.	70	10	20	20	30	47	60	60						
Cow F.C.	68	14	18	21	24	39			60	60				
Pork														
Trim 50	36	52	10	34	12	9	25	25	25	25				
Trim Reg	34	58	8	36	10	8	15	15	15	15				
Dry Ingredients														
Caseinate	10	0	90	0	40	0	5		5					
Cereal flour	12	1	10	0	18	0	10	10						
Non-fat dry milk	3	1	38	0	25	0			10	10				
Salt	.01	0	0	0	40	0	2.75	1.75	2.75	1.75				
Moist Ingredients														
Water or ice	100	0	0	0	0	0	40	40	40	40				
Fruit & Vegetables														
Pepper, sweet	93	0	1	0	0	0		20		20				
Pimiento	92	1	1	0	0	60	20		20					
Calculated composition 5% shrink														
Moisture							*63.6	*65.7	62.3	*64.5				
Fat							16.6	17.0	18.0	20.8				
Protein							12.7	10.3	13.6	11.3				
Properties														
% Collagen (Max. 35)							17.2	21.9	15.5	19.3				
Bind Points (Min. 1.8)							3.6	2.6	3.4	2.4				
Color Points (Min. 2)							3.6	3.7	2.8	2.8				

PIMIENTO LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na Erythorbate	0.1	0	0	0.87							
Spices											
Chili powder	8	12	14	2							
Coriander	5	18	15	3							
Garlic Powder	6	1	17	2							
Nutmeg	8	33	7	2							
Oregano	7	10	11	1							
Paprika	10	13	15	6							
Pepper, white	11	8.5	1.3	6							

Processing Procedure

Section 3 of 4

A.

1. Chop to 50°F
2. Add milk products
3. Chop to 60°F
4. Mix, red pepper or pimientos
5. Stuff
6. Steam cook to internal temperature of 155°F

Cooking Form

Section 4 of 4

1. Mold

POLISH (Kielbasa)

Average Values

Section 1 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Bull F.C.	70	10	20	20	30	47	30						
Cheek meat	70	20	18	59	14	48		15	15	15	15	15	
Chuck	66	16	18	30	24	38							40
Trim 90 (lean)	71	11	18	28	27	43		25	25	25	25	15	
Pork													
Cheek meat	67	15	17	72	9	29		20	20	20	20	40	20
Trim 80 (lean)	60	23	16	25	16	25	40						20
Trim 50	36	52	10	34	12	9	30						
Trim Reg	34	58	8	36	10	8		30	30	30	30	30	20
Other Meats or Mixtures or Undesignated													
Elk	71	8	21	20	30	48		10	10				
Venison	71	8	21	20	30	48				10	10		
Dry Ingredients													
Cereal flour	12	1	10	0	18	0		2		2			
Corn syrup solids	3.5	0	0	0	5	0		2	2	2	2	2	
Dextrose	.06	0	0	0	10	0	1						
Non-fat dry milk	3	1	38	0	25	0		2		2			4.5
Salt	.01	0	0	0	40	0	2.75	2.5	2.5	2.5	2.5	2.5	0.5
Soy protein concentrate	8	0	75	0	45	0							
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20	13	9	13	9	9	20
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.1		0.1	0.2	0.1	0.3
Onion	89	0	1	0	0	0						2	
Calculated composition 10% shrink													
Moisture							56.9	55.0	55.5	55.0	55.5	58.3	58.9
Fat							24.9	24.7	26.4	24.7	26.3	26.9	22.7
Protein							13.8	14.7	14.8	14.6	14.8	13.2	15.2
Properties													
% Collagen (Max. 35)							24.9	*41.0	*43.6	*41.2	*43.5	*59.0	34.9
Bind Points (Min. 1.8)							2.9	2.7	2.7	2.7	2.7	1.9	2.8
Color Points (Min. 2)							4.2	5.0	5.3	4.9	5.3	4.4	4.1

POLISH (Kielbasa)

Average Values

Section 2 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Beef													
Chuck	66	16	18	30	24	38	30	30	30	30			
Cow F.C.	68	14	18	21	24	39					30		
Trim 90 (lean)	71	11	18	28	27	43						30	30
Pork													
Cheek meat	67	15	17	72	9	29	20	10	10	10			
Head meat	65	16	17	70	7	16						10	
Picnic	59	25	16	23	20	16	10						
Trim 80 (lean)	60	23	16	25	16	25	20	40	40	40	20	40	40
Trim 50	36	52	10	34	12	9							30
Trim Reg	34	58	8	36	10	8	20	20	20	20	50	20	
Dry Ingredients													
Cereal flour	12	1	10	0	18	0		3.5					
Corn syrup solids	3.5	0	0	0	5	0							2
Dextrose	.06	0	0	0	10	0		0.5	0.5	0.5			1
MSG	0	0	0	0	0	0			0.01	0.01			0.01
Non-fat dry milk	3	1	38	0	25	0			3.5				4
Salt	.01	0	0	0	40	0	0.5	2.5	2.5	2.5	2.5	2.5	2.75
Soy protein concentrate	8	0	75	0	45	0	3.5						
Sugar (sucrose)	.06	0	0	0	10	0						0.5	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	23	20	20	10		8	20
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.25	0.25		0.25		
Onion	89	0	1	0	0	0			2				
Calculated composition 10% shrink													
Moisture							59.9	57.2	57.4	55.1	42.5	55.6	53.8
Fat							23.2	23.8	23.4	26.6	*40.9	25.7	24.1
Protein							15.6	13.5	14.2	14.8	13.6	15.1	14.1
Properties													
% Collagen (Max. 35)							32.6	32.6	30.5	33.3	26.8	32.3	26.1
Bind Points (Min. 1.8)							3.3	2.4	2.3	2.6	2.4	2.8	2.8
Color Points (Min. 2)							3.7	3.7	3.7	4.2	3.5	4.3	3.6

POLISH (Kielbasa)

Average Values

Section 3 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							O	P	Q	R	S	T	U
Beef													
Trim 85	66	15	18	28	26	41	40						
Trim 80	63	20	17	30	24	39		25					
Trim 70	55	30	15	39	20	31			33				
Pork													
Butt	57	29	13	27	16	15				100			
Cheek meat	67	15	17	72	9	29			33				
Trim 80 (lean)	60	23	16	25	16	25		75			75	75	
Trim 50	36	52	10	34	12	9	60						
Trim Reg	34	58	8	36	10	8			34		25	25	50
Other Meats or Mixtures or Undesignated													
Elk	71	8	21	20	30	48							50
Dry Ingredients													
Cereal flour	12	1	10	0	18	0					3.5		
Dextrose	.06	0	0	0	10	0					0.5	0.5	
MSG	0	0	0	0	0	0					0.02		
Non-fat dry milk	3	1	38	0	25	0	3.5					3.5	
Salt	.01	0	0	0	40	0	2.7	2.7	3	2	3	3	2.6
Sugar (sucrose)	.06	0	0	0	10	0	1	1		0.25			0.7
Moist Ingredients													
Water or ice	100	0	0	0	0	0	25	20	10	5			15
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.3	0.25	0.25			
Onion	89	0	1	0	0	0	2						
Calculated composition 10% shrink													
Moisture							50.9	61.4	49.7	53.1	44.9	44.6	52.3
Fat							*30.8	19.9	*33.9	29.9	*33.0	*33.0	*30.9
Protein							12.0	14.6	13.0	13.4	14.9	15.9	13.6
Properties													
% Collagen (Max. 35)							27.9	26.2	*52.4	27.1	25.9	24.3	24.4
Bind Points (Min. 1.8)							2.4	2.6	*1.7	2.1	2.3	2.5	3.3
Color Points (Min. 2)							2.9	4.2	3.3	2.0	3.3	3.3	5.0

POLISH (Kielbasa)

Average Values

Section 4 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
Meat block							V							
Pork														
Trim Reg	34	58	8	36	10	8	50							
Other Meats or Mixtures or Undesignated														
Venison	71	8	21	20	30	48	50							
Dry Ingredients														
Salt	.01	0	0	0	40	0	2.6							
Sugar (sucrose)	.06	0	0	0	10	0	0.7							
Moist Ingredients														
Water or ice	100	0	0	0	0	0	15							
Fruit & Vegetables														
Garlic, fresh	61	0	6	0	0	0	0.2							
Calculated composition 10% shrink														
Moisture							52.3							
Fat							*30.9							
Protein							13.6							
Properties														
% Collagen (Max. 35)							24.4							
Bind Points (Min. 1.8)							3.3							
Color Points (Min. 2)							5.0							

POLISH (Kielbasa)

Average Values

Section 5 of 9

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.2	0.2	0.2	0.12
Na or K Nitrate	0.1	0	0	2							3
Na Erythorbate	0.1	0	0		0.87			0.87	0.87	0.87	
Spices											
Caraway seed, ground	10	15	20		2						
Celery seed, ground	6	25	18					2	1.5		
Coriander	5	18	15	2	2			2	1.5		2
Garlic, Powder	6	1	17	0.5	2	2		2	4	3	
Ginger	9	4	8.5		3						
Marjoram	4	7	11							2	
Nutmeg	8	33	7		2		3	2	2		
Paprika	10	13	15			4		4		8	
Pepper black	11	8.5	12		4					4	8
Pepper, white	11	8.5	13	6		6			5		
Thyme	8	7	9							1	
Tumeric	11	10	8			2					

POLISH (Kielbasa)

Average Values

Section 6 of 9

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat					
				9	10	11	12		
Curing Ingredients									
Na or K Nitrate	0.1	0	0	2.5					
Spices									
Coriander	5	18	15	2	2				
Garlic, Powder	6	1	17			2			
Mace	8	30	7		2				
Marjoram	4	7	11			2	1		
Nutmeg	8	33	7			2			
Pepper, black	11	8.5	12		7		4		
Pepper, white	11	8.5	1.3	6		6			

Processing Procedures

Section 7 of 9

- A.
 1. Grind, beef, 1/8"
 2. Grind, pork, 1/4"
 3. Mix
 4. Stuff
 5. Smoke
- B.
 1. Chill, meat, 30°F
 2. Grind, 1/4"
 3. Mix
 4. Stuff
 5. Dry, 38°F
- C.
 1. Grind, pork, 1/2"
 2. Chop, beef, 60°F
 3. Mix
 4. Stuff
 5. Cook to internal temperature of 155°F

POLISH (Kielbasa)

Section 8 of 9

Processing Procedures

D.

1. Grind
2. Cure, 2 days, 38°F
3. Mix
4. Stuff
5. Dry, 24 hours
6. Smoke, light
7. Cook

E.

1. Grind
2. Mix
3. Stuff
4. Cure, 12 hours, 38°F
5. Room temperature, 2 hours
6. Smoke
7. Cook
8. Shower
9. Chill

F.

1. Grind, beef, 1/8"
2. Chop, beef
3. Grind, pork, 1/4"
4. Mix
5. Stuff
6. Smoke, 2 hours, 190°F
7. Water cook, 160°F to internal temperature of 150°F
8. Water cool, internal temperature of 90°F
9. Chill, 34°F

G.

1. Grind, pork, 1/2"
2. Chop, beef, 60°F
3. Mix
4. Stuff
5. Cook to internal temperature of 155°F
6. Cool
7. Cover with 35 grain vinegar, 18 hours
8. Place in jars
9. Fill with 45 grain vinegar
10. Refrigerate

Cooking Forms

Section 9 of 9

1. A 40-42 mm hog casing
2. A 30-32 mm casing
3. Export wide beef round
4. A 32-35 mm hog casing
5. Cellulose casing
6. Beef middles

PORK AND CHEESE LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Other Meats or Mixtures or Undesignated													
Salami meat	58	28	12	39	20	31	100						
Dry Ingredients													
Cheese, cheddar	37	32	25	0	0	1	7						
Salt	.01	0	0	0	40	0	3						
Sugar (sucrose)	.06	0	0	0	10	0	0.5						
Calculated composition 7% shrink													
Moisture							51.4						
Fat							29.4						
Protein							13.4						
Properties													
% Collagen (Max. 35)							34.0						
Bind Points (Min. 1.8)							2.3						
Color Points (Min. 2)							3.6						

PORK AND CHEESE LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	0.5							
Spices											
Celery seed	6	25	18	1							
Pepper black	11	8.5	12	6							

Processing Procedure

Section 3 of 4

A.

1. Grind
2. Mix
3. Re grind
4. Mold
5. Bake
6. Cool

Cooking Form

Section 4 of 4

1. Loaf pan

PORK LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Butt	57	29	13	27	16	15	40	40					
Cheek meat	67	15	17	72	9	29	20	20	20	20			
Shank	69	9	21	55	20	25			40	40			
Trim 80 (lean)	60	23	16	25	16	25					100		
Trim Reg	34	58	8	36	10	8	40	40	40	40			
Dry Ingredients													
Caseinate	10	0	90	0	40	0	5	5	5	5			
Cereal flour	12	1	10	0	18	0	5	5	5	5			
Dextrose	.06	0	0	0	10	0	2		2				
Gelatin	13	0	85	0	20	0					2		
MSG	0	0	0	0	0	0	0.15		0.15	0.15			
Mustard, heat treated	6	25	31	0	16	5	2						
Salt	.01	0	0	0	40	0	0.75	0.75	0.75	0.75	2.5		
Sugar, brown	2	0	0	0	0	0					1		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	40	40	40	40			
Calculated composition 6% shrink													
Moisture							56.1	*57.8	60.2	61.1	54.4		
Fat							26.3	26.7	20.8	24.5	23.2		
Protein							12.0	11.9	13.9	14.1	17.8		
Properties													
% Collagen (Max. 35)							28.6	29.7	*41.1	*41.1	22.7		
Bind Points (Min. 1.8)							2.4	2.4	2.9	3.0	2.9		
Color Points (Min. 2)							*1.4	*1.4	2.3	2.4	4.0		

PORK LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Celery seed, ground	6	25	18	2		2					
Pepper black	11	8.5	12			8					
Pepper, white	11	8.5	1.3	6	6						

Processing Procedures

Section 3 of 3

- A.
1. Grind, blade or shank, 1.5"
 2. Grind, rest, 3/16"
 3. Mix
 4. Stuff
 5. Steam cook to 155°F internal temperature
 6. Chill to 40°F
 7. Chill to 28°F to slice
- B.
1. Cook pork until tender
 2. Cube pork
 3. Mix
 4. Mold

Cooking Forms

Section 4 of 4

1. Molds
2. Pans

PORKLOIN, CURED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Loin, meat	57	25	17	23	16	25	100	100					
Dry Ingredients													
Phosphate	1	0	0	0	40	0	0.5						
Salt	.01	0	0	0	40	0	6	3.6					
Sugar (sucrose)	.06	0	0	0	10	0	2	2.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	85	42.5					
Calculated composition 5% shrink													
% Pump							20.0	15.0					
Moisture							*72.0	*65.2					
Fat							13.6	17.7					
Protein							9.3	12.0					
Properties													
% Collagen (Max. 35)							23.0	23.0					
Bind Points (Min. 1.8)							*1.5	1.9					
Color Points (Min. 2)							2.3	3.0					

PORKLOIN, CURED

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	1							
Na Erythorbate	0.1	0	0	4							

Processing Procedures

Section 3 of 4

A.

1. Cure in brine, 5 days, 34°F
2. Smoke
3. Cook to internal temperature of 138°F
4. Chill, 2 hours, room temperature
5. Cool, 34°F

B.

1. Pump, 20%
2. Cure, 1 week, 34°F
3. Smoke
4. Cook to internal temperature of 140°F
5. Cool, room temperature, 2 hours
6. Chill, 34°F

Cooking Form

Section 4 of 4

1. Rack

PORK SAUSAGE

Average Values

Section 1 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Backfat	5	93	1	95	0	0	34	34	33	30	30	25	25
Head meat	65	16	17	70	7	16				10			
Rind, emulsion	38	34	27	60	1	0				7			
Trim 80 (lean)	60	23	16	25	16	25	66	66	67	33	70	75	75
Trim 50	36	52	10	34	12	9				21			
Dry Ingredients													
Dextrose	.06	0	0	0	10	0						0.4	
Rusk	5	9	14	0	16	0	19	15	18	18	20		18
Salt	.01	0	0	0	40	0	2	2	2	1.8	2.2	2	2.3
Moist Ingredients													
Water or ice	100	0	0	0	0	0	28	21	27	27	17		25
Fruit & Vegetables													
Pimiento	92	1	1	0	0	60			0.1			0.1	
Tomato puree	87	0	2	0	0	70					12		
Calculated composition 2% shrink													
Moisture							46.1	44.6	46.4	43.8	47.6	44.1	48.6
Fat (Max 50%)							33.2	35.6	33.7	35.9	8.9	40.3	29.5
Protein							9.3	9.6	9.4	9.5	9.8	12.2	10.4
Properties													
% Collagen (Max. 35)							21.8	22.8	22.1	33.3	21.2	26.4	21.9
Bind Points (Min. 1.8)							*1.4	*1.5	*1.5	*1.5	*1.5	1.9	1.8
Color Points (Min. 2)							*1.8	*1.9	*1.9	*1.2	2.0	2.9	2.1

PORK SAUSAGE

Average Values

Section 2 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Pork													
Backfat	5	93	1	95	0	0	20	20	20				
Belly trim	25	68	6	35	6	5				60			
Blood, strained	90	1	7	0	15	15					3		
Butt	57	29	13	27	16	15						50	
Cheek meat	67	15	17	72	9	29							35
Fat, caul	5	93	1	95	0	0					33		
Trim 80 (lean)	60	23	16	25	16	25	80	80	80	40	34		45
Trim Reg	34	58	8	36	10	8						50	20
Trim 15 (fat)	11	85	3	60	3	1					33		
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	9						
Rusk	5	9	14	0	16	0		20					
Salt	.01	0	0	0	40	0	2	1.5	2	2	2.5	2.5	3
Sugar (sucrose)	.06	0	0	0	10	0				0.3			0.75
Moist Ingredients													
Egg	74	12	13	0	0	1	3						
Water or ice	100	0	0	0	0	0	18	27				5	5
Calculated composition 2% shrink													
Moisture							52.3	50.9	47.0	35.9	25.4	45.9	56.4
Fat (Max 50%)							28.9	26.6	37.0	49.9	*64.4	*71.9	13.8
Protein							11.0	10.8	13.0	10.2	6.7	9.9	13.2
Properties													
% Collagen (Max. 35)							23.8	21.6	26.1	27.9	32.7	30.6	*47.3
Bind Points (Min. 1.8)							*1.7	*1.7	2.0	*1.2	*0.9	*1.4	*1.7
Color Points (Min. 2)							2.5	2.2	3.2	*1.8	*1.4	*1.2	3.4

PORK SAUSAGE

Average Values

Section 3 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	O	R	S	T	U
Meat block													
Pork													
Cheek meat	67	15	17	72	9	29	35	30					
Ham fat, cured	15	81	4	93	0	0			50	30	15		
Heart	73	10	15	27	6	32						33	
Jowl, skinned	24	71	5	43	5	2							30
Shoulder	58	27	14	25	18	15			50	70			
Snout	45	40	14	80	2	1						17	
Stomach	71	13	15	62	1	0						33	
Tongue	63	19	17	66	8	36						17	
Trim 80 (lean)	60	23	16	25	16	25		20			85		70
Trim 50	36	52	10	34	12	9	65						
Trim Reg	34	58	8	36	10	8		50					
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5						7	
Dry Ingredients													
Cereal flour	12	1	10	0	18	0						3.5	
MSG	0	0	0	0	0	0	0.3						
Rusk	5	9	14	0	16	0							20
Salt	.01	0	0	0	40	0	3	2.25	1.2	1.5	2	2	2
Sugar (sucrose)	.06	0	0	0	10	0			0.4	1.5	0.4	0.3	
Moist Ingredients													
Water or ice	100	0	0	0	0	0		5					29
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.15						
Calculated composition 2% shrink													
Moisture							44.26	49.4	34.6	42.6	51.0	64.2	51.5
Fat (Max 50%)							38.5	36.2	*54.2	42.8	31.6	16.3	26.5
Protein							12.3	11.7	54.2	10.9	14.1	14.1	10.5
Properties													
% Collagen (Max. 35)							*52.1	*48.1	6.68	32.4	27.9	*52.7	22.2
Bind Points (Min. 1.8)							*1.3	*1.3	*1.3	*1.7	2.2	*0.6	*1.6
Color Points (Min. 2)							2.3	2.5	*1.1	*1.5	3.4	2.4	*1.9

PORK SAUSAGE

Average Values

Section 4 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							V	W	X	Y	Z	AA	AB
Meat block													
Pork													
Heart	73	10	15	27	6	32							
Jowl skinned	24	71	5	43	5	2	30						
Shank	69	9	21	55	20	25		15					
Shoulder	58	27	14	25	18	15			100				
Trim 80 (lean)	60	23	16	25	16	25	70	25		100	100	100	60
Trim 50	36	52	10	34	12	9							40
Trim Reg	34	58	8	36	10	8		60					
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0		1					2
Dextrose	.06	0	0	0	10	0				0.3			
MSG	0	0	0	0	0	0					0.2		
Rusk	5	9	14	0	16	0	10						
Salt	.01	0	0	0	40	0	3	2.5	2	2.5	2	2	2.2
Sugar (sucrose)	.06	0	0	0	10	0			0.3		0.4		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	12	10	3				5
Fruit & Vegetables													
Pimiento	92	1	1	0	0	60				0.5			
Calculated composition 2% shrink													
Moisture							48.3	48.1	57.1	57.7	57.7	58.0	49.8
Fat (Max 50%)							31.3	37.7	26.2	22.7	22.9	23.0	32.3
Protein							11.5	10.7	13.6	15.8	15.9	16.0	12.7
Properties													
% Collagen (Max. 35)							24.5	*37.3	24.9	25.0	25.0	25.0	27.6
Bind Points (Min. 1.8)							*1.7	*1.6	2.4	2.5	2.5	2.6	1.9
Color Points (Min. 2)							2.3	2.0	2.0	3.9	3.9	4.0	2.6

PORK SAUSAGE

Average Values

Section 5 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							AC	AD	AE	AF	AG	AH	AI
Pork													
Trim 80 (lean)	60	23	16	25	16	25	60	60	50	50	50	50	30
Trim 50	36	52	10	34	12	9	40						70
Trim Reg	34	58	8	36	10	8		40	50	50	50	50	
Dry Ingredients													
Non-fat dry milk	3	1	38	0	25	0			3.5	3.5			
Salt	.01	0	0	0	40	0	2.2	2.3	2	2	2.5	2.2	1.75
Soy protein concentrate	8	0	75	0	45	0	3.1	3.5				3.1	
Sugar (sucrose)	.06	0	0	0	10	0			0.7				0.3
Textured veg. protein	8	1	50	0	35	0	8.2	14					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	13.3	25	3	5	5	10	3
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0				0.15			
Calculated composition 2% shrink													
Moisture							49.9	51.5	44.8	46.1	47.3	48.6	42.9
Fat (Max 50%)							27.9	26.2	37.8	37.4	38.4	35.8	42.1
Protein							16.1	15.8	12.4	12.3	11.4	12.7	11.5
Properties													
% Collagen (Max. 35)							18.8	15.8	25.9	25.8	28.6	24.0	30.3
Bind Points (Min. 1.8)							3.6	3.9	1.9	1.9	*1.6	2.4	*1.6
Color Points (Min. 2)							2.2	*1.9	2.2	2.1	2.2	2.1	*1.8

PORK SAUSAGE

Average Values

Section 6 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AJ	AK	AL	AM	AN	AO	AP
Meat block													
Pork													
Trim 80 (lean)	60	23	16	25	16	25	25						
Trim 50	36	52	10	34	12	9		100	100	100	100	100	100
Trim Reg	34	58	8	36	10	8	75						
Dry Ingredients													
Com syrup solids	3.5	0	0	0	5	0	1	2.2	0.2				
MSG	0	0	0	0	0	0			0.1	0.1			
Salt	.01	0	0	0	40	0	2.2	1.6	1.75	3	2.5	2.5	1.6
Sugar (sucrose)	.06	0	0	0	10	0					3		0.3
Moist Ingredients													
Water or ice	100	0	0	0	0	0	8					3	
Calculated composition 2% shrink													
Moisture							42.5	35.0	34.0	33.6	32.8	35.7	34.0
Fat (Max 50%)							45.2	*51.1	*51.9	*51.5	*50.3	*50.3	*52.1
Protein							10.0	9.8	9.9	9.9	9.7	9.7	10.0
Properties													
% Collagen (Max. 35)							31.6	34.1	34.3	33.9	33.9	34.0	34.1
Bind Points (Min. 1.8)							*1.2	*1.2	*1.2	*1.2	*1.2	*1.2	*1.2
Color Points (Min. 2)							*1.4	*0.9	*0.9	*0.9	*0.9	*0.9	*0.9

PORK SAUSAGE

Average Values

Section 7 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							AO	AR					
Pork													
Trim 50	36	52	10	34	12	9	100						
Trim Reg	34	58	8	36	10	8		100					
Dry Ingredients													
Salt	.01	0	0	0	40	0	1.5	2.5					
Sugar (sucrose)	.06	0	0	0	10	0	0.3	0.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	3						
Calculated composition 2% shrink													
Moisture							36.0	31.6					
Fat (Max 50%)							*50.6	*57.4					
Protein							9.7	7.9					
Properties													
% Collagen (Max. 35)							34.1	*36.1					
Bind Points (Min. 1.8)							*1.2	*0.8					
Color Points (Min. 2)							*0.9	*0.6					

PORK SAUSAGE

Average Values

Section 8 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25				
Na or K Nitrate	0.1	0	0	1	1						
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Allspice	8.5	8.7	6					8			
Anise	10	16	18						2		
Caraway seed	10	15	20	0.5							
Cardamon	8	3.5	9							1	1
Coriander	5	18	15	1						2	2
Fennel seed ground	8	22	18	1	1.7						
Garlic, Powder	6	1	17			0.5					
Ginger	9	4	8.5				1				
Nutmeg	8	33	7	0.5		1	1	6		1	1
Paprika	10	13	15		1				1		
Pepper black	11	8.5	12	2.5	2.5				4		
Pepper, red	8	17	12	2							
Pepper, white	11	8.5	13			7	4	7		6.2	6.2
Sage	3	14	8.5				2			2	
Thyme	8	7	9				1				

PORK SAUSAGE

Average Values

Section 9 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14	15	16
Spices											
Cayenne	8	17	12	0.8							
Celery seed, ground	6	25	18		0.5	0.5					
Chili pepper	8	17	12		1	0.9	1	1	1	1	
Coriander	5	18	15	2							4
Ginger	9	4	8.5				1	1			
Mace	8	30	7	2							4
Nutmeg	8	33	7	2			1	1			4
Pepper black	11	8.5	12		4	4.7	4		2	2	
Pepper, white	11	8.5	1.3	6				4			7
Sage	3	14	8.5		4	5	2	2	4.5	3	
Thyme	8	7	9	0.5			1	1			

PORK SAUSAGE

Average Values

Section 10 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				17	18	19	20	21	22	23	24
Spices											
Coriander	5	18	15	3	1	1					
Fennel seed ground	8	22	18				2				
Ginger	9	4	8.5				1	3	3	2	2
Mace	8	30	7		1.4	1		7	3	2	
Nutmeg	8	33	7	1.5	1	1				2	
Oregano	7	10	11				2				
Pepper black	11	8.5	12								3
Pepper red	8	17	12				1				
Pepper white	11	8.5	1.3	8	4	3	4	7	6	3	1
Sage	3	14	8.5				2	1.6	3	2	
Thyme	8	7	9	0.8							

Average Values

Section 11 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				25	26	27	28	29	30	31	32
Spices											
Ginger	9	4	8.5	1.5	1	1	1	1	0.5	0.4	0.4
Mace	8	30	7						0.5	0.4	0.4
Nutmeg	8	33	7	2	1	1	0.75		0.5		
Paprika	10	13	15					2			
Pepper black	11	8.5	12		4						
Pepper red	8	17	12					2		0.4	
Pepper red, cracked	8	17	12					1			
Pepper white	11	8.5	1.3	6		4	5		1	2.75	2.8
Sage	3	14	8.5	1.5	2	2	2	3		2	2
Thyme	8	7	9		1	1	1	1		0.4	0.4

PORK SAUSAGE

Average Values

Section 12 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				33	34	35	36	37	38	39	40
Spices											
Ginger	9	4	8.5	0.4	0.4	0.4	0.25				
Marjoram	4	7	11					1			
Mustard seed, ground	6	24	30						7		
Nutmeg	8	33	7							6	
Pepper black	11	8.5	12	4.5	4.5	2	3.5		7		7
Pepper, white	11	8.5	1.3					8		7	
Sage	3	14	8.5	2.1		2	2.7	1	7		7

Average Values

Section 13 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				41	42	43	44	45		
Spices										
Pepper black	11	8.5	12	4	2.1					
Pepper, red	8	17	12		2	4.5	4			
Pepper, white	11	8.5	1.3					7		
Sage	3	14	8.5		4	2	1	3		

PORK SAUSAGE

Section 14 of 16

Processing Procedures

- A.
 - 1. Mix
 - 2. Grind
 - 3. Fry, brown
 - 4. Pack in jars while hot
 - 5. Pour hot fat over
 - 6. Close jar, turn upside down, cool
 - 7. Store in a cool place
- B.
 - 1. Grind, 1/2"
 - 2. Mix
 - 3. Grind, 3/16"
 - 4. Stuff
 - 5. Sell, fresh or frozen
- C.
 - 1. Chill, meat, 32°F
 - 2. Grind, 1/4"
 - 3. Mix
 - 4. Stuff, link
 - 5. Dry, room temperature
 - 6. Heavy smoke
 - 7. Cook, internal temperature of 142°F
 - 8. Shower to 110°F internal temperature
 - 9. Dry, room temperature
 - 10. Chill, 38°F, 18 hours
- D.
 - 1. Grind
 - 2. Mix
 - 3. Stuff
 - 4. Cure, 36°F, 18 hours
 - 5. Cold smoke, 4 hours
 - 6. Cool, 36°F
- E.
 - 1. Boil, meat
 - 2. Chop
 - 3. Grind, fat, moderate fine
 - 4. Mix
 - 5. Add blood for color
 - 6. Stuff

PORK SAUSAGE

Section 15 of 16

Processing Procedures

F.

1. Grind, shank, 1/8"
2. Grind, rest 1"
3. Mix
4. Grind, 3/16"
5. Stuff
6. Dry, 70°F, 2 hours
7. Smoke house, cook to internal temperature of 142°F
8. Shower to 110°F internal temperature
9. Dry, 70°F, 2 hours
10. Chill, 45°F
11. Peel
12. Package
13. Refrigerate

G.

1. Cook, meat
2. Chill, meat, 32°F
3. Grind
4. Chop
5. Mix
6. Stuff
7. Cook to internal temperature of 140°F
8. Dry, 70°F
9. Chill

H.

1. Hog skinned
2. Hot boned
3. Grind, 1/16"
4. Mix, minimum temperature of 85°F
5. Place in tub, 5 inch, chill
6. Stuff

I.

1. Chill, meat, 32°F
2. Grind, 3/16"
3. Mix
4. Stuff
5. Chill, 28°F

J.

1. Grind
2. Mix
3. Chop

PORK SAUSAGE

Cooking Forms

Section 16 of 16

1. Hog casing 3.5-4 in. length
2. Bulk
3. A 24-26 mm hog casing
4. A 24-26 mm sheep casing
5. A 20/22 sheep casing
6. A 28/32 hog casing
7. Cloth bags
8. Large size hog casing
9. Large size sheep casing
10. A 22-32 mm cellulose casing
11. A 12 mm cellulose casing
12. Cloth 3" casing
13. Fibrous 3" casing
14. A 28-30 mm hog casing

POTATO SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A	B	C	D	E	F
Beef												
Trim 90 (lean)	71	11	18	28	27	43	50					
Trim 85	66	15	18	28	26	41		60				
Trim 80	63	20	17	30	24	39			35			
Trim 75	58	25	16	38	22	34				60	29	29
Pork												
Backfat	5	93	1	95	0	0	25					
Butt	57	29	13	27	16	15					71	71
Trim 80 (lean)	60	23	16	25	16	25	25	40				
Trim 50	36	52	10	34	12	9			65			
Trim Reg	34	58	8	36	10	8				40		
Dry Ingredients												
Non-fat dry milk	3	1	38	0	25	0			8		6	6
Salt	.01	0	0	0	40	0	2.3	2	3.5	2.5	2.8	2.8
Moist Ingredients												
Water or ice	100	0	0	0	0	0			24		24	14
Fruit & Vegetables												
Onion	89	0	1	0	0	0		10	8	4		0.5
Potato, dehydrated	5	1	7	0	0	0			8		11	
Potato, fresh	80	0	2	0	0	0	58	87		30		43
Calculated composition 1% shrink												
Moisture							*60.8	*71.1	50.4	*55.2	56.6	63.6
Fat							21.7	9.2	27.3	28.3	19.7	16.9
Protein							9.1	9.7	10.7	9.9	11.9	10.3
Properties												
% Collagen (Max. 35)							26.0	24.2	24.9	*35.9	25.1	25.1
Bind Points (Min. 1.8)							1.9	1.9	1.9	1.8	2.2	1.9
Color Points (Min. 2)							3.1	3.1	*1.9	2.6	2.1	*1.8

POTATO SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1	2	3	4	5		
Spices										
Allspice	8.5	8.7	6	2.8	2.7	2	1			
Cardamon	8	3.5	9				1			
Cloves	7	22	6				1.5			
Ginger	9	4	8.5				2	4		
Mace	8	30	7					8		
Marjoram	4	7	11			2	2.5			
Nutmeg	8	33	7			2	2			
Onion, granulated	4	1	9			12				
Pepper black	11	8.5	12		0.7	5				
Pepper, white	11	8.5	1.3	7.1			9	8		
Sage	3	14	8.5					4		

POTATO SAUSAGE

Section 3 of 4

Processing Procedures

A.

1. Grind, 3/8"
2. Mix
3. Regrind, 3/8"
4. Stuff
5. Very perishable

Storage,
Frozen or
Cover with water, 28°F

6. Cook

Fry
Bake
Boil

B.

1. Grind
2. Mix
3. Regrind
4. Stuff
5. Sell fresh or frozen

C.

1. Coarse grind, all meat
2. Mix, meat, vegetables, spices
3. Stuff firm but don't overfill
4. Link, 18 inches
5. Sell fresh

Cooking Forms

Section 4 of 4

1. A 30-40 mm hog casing
2. Beef round
3. Prick casing to allow fat to escape
4. Cover with water

Cook 30-40 minutes
Serve warm

POTTED MEAT

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Beef													
Lungs, cooked	68	4	26	95	1	3	25						
Tripe, cooked	80	2	19	100	0	0	23						
Pork													
Skin, cooked	10	18	70	99	0	0	14						
Trim 80 (lean) cooked	52	27	20	25	10	22	15						
Tripe, cooked	80	2	19	100	0	0	23						
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	8						
Dry Ingredients													
Salt	.01	0	0	0	40	0	2						
Sugar (sucrose)	.06	0	0	0	10	0	0.5						
Calculated composition 6% shrink													
Moisture							61.89						
Fat							8.2						
Protein							27.1						
Properties													
% Collagen (Max. 35)							*90.1						
Bind Points (Min. 1.8)							*0.3						
Color Points (Min. 2)							*0.8						

POTTED MEAT

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1						
Curing Ingredients										
Na or K Nitrite	0.1	0	0	0.2						
Spices										
Coriander	5	18	15	2.5						
Mustard seed, ground	6	24	30	14						
Nutmeg	8	33	7	0.6						
Onion powder	5	1	10	1						
Pepper black	11	8.5	12	4.5						
Pepper, red	8	17	12	0.3						

Processing Procedure

Section 3 of 4

A.

1. Cure and cook stomach and lungs in

130 pounds H₂O
0.3 ounce sodium nitrite

2. Cook beef tripe and pork skin in water
3. Cook pork in water and save broth
4. Grind, 1/8"
5. Mix
6. Chop
7. Reheat
8. Stuff
9. Retort

Cooking Form

Section 4 of 4

1. Cans

POULTRY BARBECUE SAUCE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Dry Ingredients												
Salt	.01	0	0	0	40	0	0.7					
Moist Ingredients												
Oil	0	100	0	0	0	0	5					
Water or ice	100	0	0	0	0	0	10					
Calculated composition 3% shrink												
Moisture							62.57					
Fat							*32.8					
Protein							0					

POULTRY BARBECUE SAUCE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per sauce							
				1							
Spices											
Vinegar	94	0	0	160							

Processing Procedure

Section 3 of 4

- A.
1. Mix
 2. Heat
 3. Apply while cooking

Cooking Form

Section 4 of 4

1. Vat

POULTRY COATING BATTER

Average Values

Section 1 of 2

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Dry Ingredients													
Cereal flour, wheat	12	1	10	0	18	0	37						
Non-fat dry milk	3	1	38	0	25	0	1	1					
Rice flour, waxy	3	0	5	0	40	0		37					
Salt	.01	0	0	0	40	0	3	3					
Moist Ingredients													
Egg yolk	51	30	16	0	5	5	5	5					
Water or ice	100	0	0	0	0	0	54	54					
Calculated composition 0% shrink													
Moisture							*61.0	*57.7					
Fat							1.9	1.5					
Protein							4.9	3.0					
Properties													
% Collagen (Max. 35)							0.0	0.0					
Bind Points (Min. 1.8)							*0.8	*0.9					
Color Points (Min. 2)							*0.0	*0.0					

Cooking Form

Section 2 of 2

1. Mixer

POULTRY MARINADE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Dry Ingredients												
Sugar, brown	2	0	0	0	0	0	2.2					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	10					
Calculated composition 2% shrink												
Moisture							*82.0					
Fat							0					
Protein							0					

POULTRY MARINADE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per sauce							
				1							
Spices											
Soy sauce	63	1	6	160							

Processing Procedure

Section 3 of 4

- A.
1. Marinade overnight
 2. Cook

Cooking Form

Section 4 of 4

1. Vat

PRAGUE SAUSAGE (Proschke)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Beef													
Bull F.C.	70	10	20	20	30	47	45						
Veal													
Lean	69	10	19	27	26	30	20						
Pork													
Backfat	5	93	1	95	0	0	10						
Trim 80 (lean)	60	23	16	25	16	25	25						
Dry Ingredients													
Salt	.01	0	0	0	40	0	3						
Sugar (sucrose)	.06	0	0	0	10	0	1						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.2						
Calculated composition 10% shrink													
Moisture							57.89						
Fat							20.9						
Protein							16.4						
Properties													
% Collagen (Max. 35)							23.3						
Bind Points (Min. 1.8)							4.2						
Color Points (Min. 2)							6.2						

PRAGUE SAUSAGE (Proschke)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1						
Curing Ingredients										
Na or K Nitrate	0.1	0	0	0.5						
Spices										
Coriander	5	18	15	2						
Mace	8	30	7	2						
Pepper, white	11	8.5	1.3	7						

Processing Procedure

Section 3 of 4

A.

1. Grind meat
2. Mix
3. Stuff
4. Slow smoke
5. Cook to internal temperature of 150°F

Cooking Form

Section 4 of 4

1. Artificial casing

PRESSED LOAF

Average Values

Section 1 of 4

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Beef													
Comed beef, canned	44	32	22	30	18	16	100						
Trim 90 (lean)	71	11	18	28	27	43		15					
Veal													
Lean	69	10	19	27	26	30			100				
Pork													
Feet, meat	67	15	17	55	20	20				87			
Trim 80 (lean)	60	23	16	25	16	25		85			100		
Tripe	74	15	10	100	0	0						20	
Other Meats or Mixtures or Undesignated													
Bologna meat	56	30	12	39	20	31						80	
Rabbit	70	8	21	35	18	17				13			100
Dry Ingredients													
Gelatin	13	0	85	0	20	0	2		1.5	0.3	1		2
MSG	0	0	0	0	0	0						0.4	
Salt	.01	0	0	0	40	0	2.5	3	2.5	3	2.5	2.4	3
Sugar (sucrose)	.06	0	0	0	10	0						0.4	
Moist Ingredients													
Water or ice	100	0	0	0	0	0					75		
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0					0.2		
Lemon juice	91	0	1	0	0	0			1.5				
Calculated composition 5% shrink													
Moisture							39.3	57.7	65.13	63.4	*74.4	55.5	65.17
Fat							*32.2	21.7	9.9	14.3	13.5	27.5	8.0
Protein							23.9	16.6	30.2	18.1	9.9	11.8	22.7
Properties													
% Collagen (Max. 35)							27.8	25.6	25.3	*51.2	23.8	*49.7	32.5
Bind Points (Min. 1.8)							4.3	2.9	5.2	3.6	*1.6	1.9	4.1
Color Points (Min. 2)							3.5	4.7	5.7	3.5	2.4	3.0	3.6

PRESSED LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4				
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	0.5							
Spices											
Bay leaves	5	8	8		1						
Celery seed, ground	6	25	18	1.6		1					
Mustard seed, ground	6	25	31		1						
Paprika	10	13	15		3						
Parsley flakes	9	4	23			3.5					
Pepper, white	11	8.5	1.3	4.8	4	5	5				

PRESSED LOAF

Section 3 of 4

Processing Procedures

- A.
 - 1. Cook stomach and cube
 - 2. Grind
 - 3. Mix
 - 4. Stuff
 - 5. Cook
- B.
 - 1. Boil or pressure cook meat
 - 2. Drain and strain broth
 - 3. Grind meat
 - 4. Add gelatin to broth
 - 5. Mix
 - 6. Chill
- C.
 - 1. Cook meat
 - 2. Boil broth and add gelatin
 - 3. Mix
 - 4. Boil
 - 5. Loaf pan
 - 6. Cool
- D.
 - 1. Cube, pork, 1"
 - 2. Dry cure, meat
 - 3. Chop, beef
 - 4. Mix
 - 5. Stuff
 - 6. Cook to internal temperature of 155°F
 - 7. Shower
 - 8. Room temperature, 2 hours
 - 9. Cool
- E.
 - 1. Soak corned beef, 2 hours
 - 2. Cook, till tender
 - 3. Cut, 1" strips
 - 4. Stuff
 - 5. Pour gelatin over meat
 - 6. Place in a retainer
 - 7. Cool

Cooking Form

Section 4 of 4

- 1. Loaf pan

PROSCUITTI

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Pork												
Ham, fresh, 10-15 lbs.	71	7	20	24	18	21	100					
Dry Ingredients												
Salt	.01	0	0	0	40	0	4.5					
Sugar (sucrose)	.06	0	0	0	10	0	1.75					
Calculated composition 25% shrink												
Moisture							55.8					
Fat							8.7					
Protein							25.1					
Properties												
% Collagen (Max. 35)							23.9					
Bind Points (Min. 1.8)							4.5					
Color Points (Min. 2)							5.3					

PROSCIUITTI

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Spices											
Allspice	8.5	8.7	6	2.5							
Coriander	5	18	15	0.1							
Mustard seed, ground	6	25	31	0.1							
Nutmeg	8	33	7	0.5							
Pepper black	11	8.5	12	0.5							
Pepper, white	11	8.5	1.3	1.5							

Processing Procedure

Section 3 of 4

A.

1. Leave skin on hams
2. Bone, press flat, 2" thick
3. Chill, 34°F
4. Dry cure, 10 days, 36°F
5. Soak, 15 hours, 65°F, change water, soak 7 hours
6. Scrub with brush
7. Slow smoke, 48 hours
8. Cook
9. Room temperature, to dry
10. Rub with mixture of black and white pepper
11. Dry room, 70°F, 70% RH, 30 days

Cooking Form

Section 4 of 4

1. Hang

PUDDING, SCOTCH

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Fat	5	94	1	95	0	0	100						
Dry Ingredients													
Oatmeal, fine	8	7	14	0	15	0	140						
Salt	.01	0	0	0	40	0	1.8						
Fruit & Vegetables													
Onion	89	0	1	0	0	0	32						
Calculated composition 5% shrink													
Moisture							11.9						
Fat							*39.9						
Protein							8.0						
Properties													
% Collagen (Max. 35)							0						
Bind Points (Min. 1.8)							*1.1						
Color Points (Min. 2)							*0						

PUDDING, SCOTCH

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per pudding							
				1	2						
Spices											
Pepper black	11	8.5	12	35							
Pepper, white	11	8.5	1.3	35	35						

Processing Procedure

Section 3 of 4

- A.
1. Cube, suet
 2. Mix
 3. Stuff
 4. Cook, 212°F, 30 Minutes
 5. Cool

Cooking Form

Section 4 of 4

1. Artificial casing

RABBIT SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Beef													
Fat	5	94	1	95	0	0	17	17					
Other Meats or Mixtures or Undesignated													
Rabbit	70	8	21	35	18	17	83	83					
Dry Ingredients													
Salt	.01	0	0	0	40	0	2.2	2					
Calculated composition 1% shrink													
Moisture							57.3	57.4					
Fat							22.3	22.4					
Protein							17.4	17.4					
Properties													
% Collagen (Max. 35)							*35.6	*35.6					
Bind Points (Min. 1.8)							3.1	3.1					
Color Points (Min. 2)							2.9	2.9					

RABBIT SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Spices											
Cerelose (glucose)	0	0	0	6							
Ginger	9	4	8.5	0.5							
Mace	8	30	7	0.5							
Pepper black	11	8.5	12		4						
Pepper, red	8	17	12	0.5							
Pepper, white	11	8.5	1.3	3							
Sage	3	14	8.5	2	4						
Thyme	8	7	9	0.5							

Processing Procedure

Section 3 of 4

- A.
1. Grind
 2. Mix
 3. Grind
 4. Stuff

Cooking Form

Section 4 of 4

1. Collagen casing

ROAST BEEF LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D			
Beef													
Chuck	66	16	18	30	24	38	75						
Fat	5	94	1	95	0	0		10					
Plate	41	40	18	42	16	25	25						
Trim 90 (lean)	71	11	18	28	27	43		90	100	100			
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	45		20	20			
Dry Ingredients													
Gelatin	13	0	85	0	20	0		2	3	3			
Non-fat dry milk	3	1	38	0	25	0	12	3					
Salt	.01	0	0	0	40	0	3.5	2	1.4	1.4			
Sugar (sucrose)	.06	0	0	0	10	0			0.7	0.7			
Moist Ingredients													
Worcestershire sauce	62	1	6	0	0	90	0.2	0.15	0.1				
Fruit & Vegetables													
Catsup	69	1	2	0	0	80	10	3.5	0.7				
Onion	89	0	1	0	0	0	2	2.5					
Calculated composition 10% shrink													
Moisture							61.9	53.2	69.8	69.9			
Fat							14.3	19.0	9.7	9.8			
Protein							14.9	18.9	18.3	18.4			
Properties													
% Collagen (Max. 35)							25.6	24.1	24.3	24.3			
Bind Points (Min. 1.8)							3.3	4.9	4.7	4.8			
Color Points (Min. 2)							4.1	6.9	6.9	6.9			

ROAST BEEF LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3					
Curing Ingredients											
Na Erythorbate	0.1	0	0	0.87							
Spices											
Bay leaves	5	8	8		2						
Celery seed	6	25	18	0.1							
Garlic Powder	6	1	17	0.05							
Onion powder	5	1	10	0.7							
Pepper black	11	8.5	12	2.7		4					
Pepper, white	11	8.5	1.3		8						
Vinegar	94	0	0	4	4.8						

Processing Procedure

Section 3 of 4

A.

1. Cube, beef
2. Water, cook
3. Add, gelatine
4. Mix
5. Stir and cook, 15 minutes
6. Place in mold
7. Chill, 18 hours

Cooking Form

Section 4 of 4

1. Pans
2. Molds
3. Artificial casing

ROAST PIG

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Pork												
Pig 4-6 weeks	73	6	20	25	15	20	use					
Dry Ingredients												
Bread crumb	7	5	13	0	15	0	use					
Moist Ingredients												
Butter	15	81	1	0	0	1	use					
Egg	74	12	13	0	0	1	use					
Fruit & Vegetables												
Onion	89	0	1	0	0	0	0.5					

ROAST PIG

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Spices											
Pepper black	11	8.5	12	use							
Sage	3	14	8.5	use							

Processing Procedure

Section 3 of 4

- A.
1. Scald, scrape clean, dry
 2. Remove, toes, entrails, brains, eyes, upper and lower jaws
 3. Stuff body cavity with dressing
 4. Stitch
 5. Boil heart in salted water
 6. Place cooked heart in boneless head skin
 7. Roast, 3 hours, baste

Cooking Form

Section 4 of 4

1. Rack

ROLL

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C				
Beef													
Veal													
Sides, deboned	71	8	20	30	22	30	100						
Pork													
Shoulder	58	27	14	25	18	15		70					
Trim Reg	34	58	8	36	10	8		30					
Other Meats or Mixtures or Undesignated													
Lamb, side, deboned	66	15	18	25	25	25			100				
Dry Ingredients													
Dextrose	.06	0	0	0	10	0		0.75					
Gelatin	13	0	85	0	20	0	3		3				
MSG	0	0	0	0	0	0	0.15		0.15				
Salt	.01	0	0	0	40	0	2.1	3.5	2.6				
Starter culture	12	1	0	0	30	0		use					
Sugar (sucrose)	.06	0	0	0	10	0	0.5	2	0.5				
Calculated composition 12% shrink													
Moisture							63.1	40.7	57.4				
Fat							8.6	*38.8	16.0				
Protein							24.2	13.0	21.9				
Properties													
% Collagen (Max. 35)							26.6	27.2	21.9				
Bind Points (Min. 1.8)							5.3	2.1	5.4				
Color Points (Min. 2)							6.4	*1.8	4.8				

ROLL

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4				
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.2	0.2	0.12	0.12				
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Allspice	8.5	8.7	6	2							
Celery seed, ground	6	25	18		2						
Coriander	5	18	15			1					
Marjoram	4	7	11	2	3						
Mustard seed, ground	6	25	31			5					
Onion powder	5	1	10	2	3						
Paprika	10	13	15			1.6	1.6				
Pepper, white	11	8.5	1.3	4	3	5	5				
Sage	3	14	8.5	1	2						

Processing Procedures

Section 3 of 4

- A.
1. Dry cure meat, 7 days, 34°F
 2. Add seasoning
 3. Form into rolls
 4. Tie
 5. Place in pans, cover
 6. Water cook, 3 hours
 7. Internal temperature of 155°F
 8. Water cool, 90°F
 9. Chill, 34°F
- B.
1. Grind, 3/4"
 2. Add starter culture
 3. Grind, 3/16"
 4. Grind, 1/8"
 5. Stuff
 6. Slow smoke
 7. Cook to internal temperature of 140°F

Cooking Forms

Section 4 of 4

1. Loaf pan
2. Tie

ROYAL CAMBRIDGE SAUSAGE

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Beef													
Fat	5	94	1	95	0	0	38						
Trim 90 (lean)	71	11	18	28	27	43	62						
Dry Ingredients													
Rice	12	1	7	0	40	0	30						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	30						
Calculated composition 0% shrink													
Moisture							*49.7						
Fat							26.8						
Protein							8.5						
Properties													
% Collagen (Max. 35)							22.9						
Bind Points (Min. 1.8)							2.4						
Color Points (Min. 2)							3.0						

Processing Procedure

Section 2 of 3

- A.
1. Boil rice, 10 minutes
 2. Chop and mix

Cooking Form

Section 3 of 3

1. Pan

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 1 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	70	50	50	15			
Cheek meat	70	20	18	59	14	48					30	30	20
Cow F.C.	68	14	18	21	24	39					30		40
Fat, brisket	5	93	1	95	0	0	30						
Plate	41	40	18	42	16	25							40
Trim 90 (lean)	71	11	18	28	27	43						30	
Pork													
Backfat	5	93	1	95	0	0					20	20	
Cheek meat	67	15	17	72	9	29					20	20	
Shoulder	58	27	14	25	18	15		50					
Trim 80 (lean)	60	23	16	25	16	25				70			
Trim Reg	34	58	8	36	10	8			50				
Trim 15 (fat)	11	85	3	60	3	1				15			
Dry Ingredients													
Dextrose	.06	0	0	0	10	0				0.4			
Non-fat dry milk	3	1	38	0	25	0		1					
Salt	.01	0	0	0	40	0	3	2.5	2.6	2.75	3	2.7	3
Sugar (sucrose)	.06	0	0	0	10	0		0.5	0.4	0.4	0.25		0.25
Moist Ingredients													
Corn syrup	20	0	0	0	5	0						0.7	
Water or ice	100	0	0	0	0	0		25	25	13	3	10	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.15	0.15				
Calculated composition 7% shrink													
Moisture							45.2	66.7	*57.2	54.4	52.0	55.9	52.5
Fat							*36.4	15.4	28.5	28.0	*32.2	29.3	26.7
Protein							14.9	14.5	11.7	13.5	14.6	13.6	18.7
Properties													
% Collagen (Max. 35)							21.6	21.5	24.7	25.1	*48.2	*51.1	*37.1
Bind Points (Min. 1.8)							4.4	3.6	2.9	2.5	2.4	2.4	3.5
Color Points (Min. 2)							6.9	4.8	4.2	3.9	5.8	5.6	6.6

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 2 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Cheek meat	70	20	18	59	14	48	20	10	10	10			
Chuck	66	16	18	30	24	38		50	50		75	70	60
Fat, brisket	5	93	1	95	0	0					25		
Heart	70	13	17	27	6	40		20					
Plate	41	40	18	42	16	25						30	40
Trim 90 (lean)	71	11	18	28	27	43	40			30			
Pork													
Cheek meat	67	15	17	72	9	29	20						
Heart	73	10	15	27	6	32			20				
Trim Reg	34	58	8	36	10	8	20			60			
Trim 15 (fat)	11	85	3	60	3	1		20	20				
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0				2			
Dextrose	.06	0	0	0	10	0				1	0.5	0.5	
MSG	0	0	0	0	0	0						0.3	
Mustard, heat treated	6	25	31	0	16	5						1	
Salt	.01	0	0	0	40	0	2.7	3	3	3	3	3	3
Sugar (sucrose)	.06	0	0	0	10	0							0.25
Moist Ingredients													
Corn syrup	20	0	0	0	5	0	0.7						
Water or ice	100	0	0	0	0	0	10			25			
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0					0.25		
Calculated composition 7% shrink													
Moisture							57.4	51.1	51.8	*53.0	45.2	52.8	50.9
Fat							21.8	*30.9	*30.3	*32.9	*36.5	24.1	26.7
Protein							14.9	15.4	15.0	9.8	14.3	18.8	18.7
Properties													
% Collagen (Max. 35)							*45.6	34.2	34.3	*36.0	31.1	33.3	34.9
Bind Points (Min. 1.8)							2.8	2.7	2.7	1.8	3.4	4.0	3.9
Color Points (Min. 2)							5.6	5.9	5.5	2.9	5.3	6.3	6.1

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 3 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	Q	R	S	T	U
Meat block													
Beef													
Chuck	66	16	18	30	24	38	60	60	60	33	10		
Cow F.C.	68	14	18	21	24	39						60	60
Plate	41	40	18	42	16	25					35	40	40
Pork													
Cheek meat	67	15	17	72	9	29	25	25					
Trim 80 (lean)	60	23	16	25	16	25				33			
Trim Reg	34	58	8	36	10	8	15	15	40	34	40		
Trim 15 (fat)	11	85	3	60	3	1					15		
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	2						
Dextrose	.06	0	0	0	10	0				0.2			
Mustard, heat treated	6	25	31	0	16	5					1		
Non-fat dry milk	3	1	38	0	25	0		4.7					
Salt	.01	0	0	0	40	0	3	3	3	3	3	3.2	3
Sugar (sucrose)	.06	0	0	0	10	0	0.5		0.5	0.2	0.5	0.5	0.25
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20	6					
Wine, sherry	85	0	0	0	0	10			8				
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.15			0.15			
Calculated composition 7% shrink													
Moisture							62.5	56.6	50.3	47.7	29.8	51.8	51.9
Fat							18.8	20.9	*31.6	*33.8	*53.3	25.3	25.4
Protein							14.1	17.0	13.5	14.5	12.4	18.7	18.7
Properties													
% Collagen (Max. 35)							*40.9	*37.4	31.4	29.2	*38.2	29.3	29.5
Bind Points (Min. 1.8)							2.7	3.3	2.8	2.6	1.9	3.9	3.9
Color Points (Min. 2)							4.6	3.7	4.2	3.9	2.6	6.2	6.3

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 4 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							V	W	X	Y	Z	AA	AB
Beef													
Cow F.C.	68	14	18	21	24	39	60	40	30				
Flank	43	42	13	24	12	20				30			
Head meat	66	16	17	73	8	26					10		
Heart	70	13	17	27	6	40						20	20
Plate	41	40	18	42	16	25		40				30	
Trim 90 (lean)	71	11	18	28	27	43					30		
Trim 85	66	15	18	28	26	41							40
Trim 75	58	25	16	38	22	34				70			
Trim 70	55	30	15	39	20	31						50	
Pork													
Check meat	67	15	17	72	9	29		20					
Trim 80 (lean)	60	23	16	25	16	25			35				
Trim 50	36	52	10	34	12	9							40
Trim Reg	34	58	8	36	10	8	40		35		60		
Dry Ingredients													
Com syrup solids	3.5	0	0	0	5	0					2		
Dextrose	.06	0	0	0	10	0					1		2.5
Non-fat dry milk	3	1	38	0	25	0							4
Salt	.01	0	0	0	40	0	3	3.2	3	2.6	3	3	2.7
Sugar (sucrose)	.06	0	0	0	10	0	0.25	0.5	0.25	1			1
Moist Ingredients													
Water or ice	100	0	0	0	0	0	3		3	15	25		25
Calculated composition 7% shrink													
Moisture							51.8	52.4	49.5	54.6	*52.7	48.6	56.0
Fat							29.6	23.8	*34.1	27.3	*32.6	*30.9	23.4
Protein							15.4	19.3	13.9	13.7	9.8	17.0	12.8
Properties													
% Collagen (Max. 35)							23.4	*38.0	25.8	34.4	*37.5	*37.5	26.7
Bind Points (Min. 1.8)							4.0	4.0	2.5	2.7	*1.7	2.7	3.3
Color Points (Min. 2)							6.0	6.8	3.8	4.2	2.6	5.3	3.7

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 5 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AC	AD	AE	AF	AG	AH	AI
Meat block													
Beef													
Heart	70	13	17	27	6	40	20	10					
Plate	41	40	18	42	16	25			30				
Trim 90 (lean)	71	11	18	28	27	43		30		65	50	50	50
Trim 85	66	15	18	28	26	41	40						
Trim 70	55	30	15	39	20	31			50				
Pork													
Heart	73	10	15	27	6	32			20				
Trim 80 (lean)	60	23	16	25	16	25					40	40	
Trim 50	36	52	10	34	12	9	40						
Trim Reg	34	58	8	36	10	8		60		35	10	10	50
Dry Ingredients													
Com syrup solids	3.5	0	0	0	5	0		2					
Dextrose	.06	0	0	0	10	0		1					
MSG	0	0	0	0	0	0					0.25		
Salt	.01	0	0	0	40	0	2.7	3	3	2.7	3	2.75	2.7
Sugar (sucrose)	.06	0	0	0	10	0	1				0.5		
Moist Ingredients													
Com syrup	20	0	0	0	5	0	2			0.7		0.7	0.7
Water or ice	100	0	0	0	0	0	15	25		10		10	10
Wine, sherry	85	0	0	0	0	10					8		
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0				0.08			
Calculated composition 7% shrink													
Moisture							55.0	53.0	49.3	57.1	59.5	61.7	51.9
Fat							26.2	29.8	*30.3	26.0	19.7	19.4	*32.7
Protein							13.0	34.4	16.6	13.7	15.6	15.3	12.3
Properties													
% Collagen (Max. 35)							29.4	8.8	*37.8	29.6	27.2	27.3	30.5
Bind Points (Min. 1.8)							2.3	*1.7	2.7	3.3	3.4	3.3	2.7
Color Points (Min. 2)							4.2	2.8	4.8	4.9	5.3	5.2	3.9

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 6 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AJ	AK	AL	AM	AN	AO	AP
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	40	40					
Trim 80	63	20	17	30	24	39			33				
Trim 75	58	25	16	38	22	34				35			
Trim 70	55	30	15	39	20	31					50		
Trim 50	38	50	11	42	12	19						40	40
Pork													
Backfat	5	93	1	95	0	0				15			
Trim 80 (lean)	60	23	16	25	16	25	30	30	33	50	35		
Trim Reg	34	58	8	36	10	8	30	30	34		15		
Other Meats or Mixtures or Undesignated													
Elk	71	8	21	20	30	48						60	
Venison	71	8	21	20	30	48							60
Dry Ingredients													
Dextrose	.06	0	0	0	10	0				0.2			
Salt	.01	0	0	0	40	0	3	3	3	3.4	3	1.6	1.6
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5		0.3		1	1
Moist Ingredients													
Water or ice	100	0	0	0	0	0	15					14	14
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.15					0.2
Calculated composition 7% shrink													
Moisture							57.4	51.3	46.9	45.3	48.4	58.7	58.7
Fat							26.0	29.8	*35.4	*35.3	*33.1	22.9	22.8
Protein							13.1	14.9	14.2	14.2	14.9	15.7	15.7
Properties													
% Collagen (Max. 35)							28.3	28.4	29.3	31.1	33.3	25.7	25.6
Bind Points (Min. 1.8)							2.7	3.1	2.6	2.6	2.6	4.0	3.9
Color Points (Min. 2)							4.1	4.7	3.9	4.0	3.9	6.4	6.3

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 7 of 16

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							AQ	AR	AS				
Beef													
Trim 40	27	65	7	36	8	14	60						
Pork													
Backfat	5	93	1	95	0	0		20	20				
Trim Reg	34	58	8	36	10	8	40						
Other Meats or Mixtures or Undesignated													
Elk	71	8	21	20	30	48		80					
Venison	71	8	21	20	30	48			80				
Dry Ingredients													
Salt	.01	0	0	0	40	0	3	3.2	3.2				
Soy protein concentrate	8	0	75	0	45	0		3.5	3.5				
Moist Ingredients													
Water or ice	100	0	0	0	0	0		10	10				
Calculated composition 7% shrink													
Moisture							23.6	55.2	55.2				
Fat							*64.9	23.0	23.0				
Protein							7.7	18.1	18.1				
Properties													
% Collagen (Max. 35)							*36.1	18.1	18.1				
Bind Points (Min. 1.8)							*0.7	5.7	5.7				
Color Points (Min. 2)							*0.9	7.4	7.4				

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 8 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	2.5	2	2	2	1	1	1	1
Na Erythorbate	0.1	0	0		0.87			0.87	0.87	0.87	
Spices											
Allspice	8.5	8.7	6					0.5	0.5	0.5	
Caraway seed	10	15	20					0.2	0.2		
Cardamon	8	3.5	9		1	1	1				2
Coriander	5	18	15			2.5					
Garlic, Powder	6	1	17		2	1	1	1		0.3	
Ginger	9	4	8.5					0.5	0.5	1.5	
Mace	8	30	7			1.2					
Nutmeg	8	33	7					1	1	1.5	
Paprika	10	13	15			1.2				2	
Pepper black	11	8.5	12		3.4	2	6			1	7
Pepper, black, cracked	9	9	11					5.5	5.5		
Pepper, white	11	8.5	1.3	6	3.4						

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 9 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14	15	16
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	0.5	0.5	0.5	0.5	0.3			
Na Erythorbate	0.1	0	0					0.87	0.87	0.87	
Spices											
Anise seed	10	16	18						1		
Cardamon	8	3.5	9	1	1	1					2
Coriander	5	18	15	2.5			2	1		1.5	
Garlic, Powder	6	1	17		1	1	2	2	2	0.12	
Mace	8	30	7	1.2							
Nutmeg	8	33	7							0.5	
Paprika	10	13	15	1.2							
Pepper black	11	8.5	12	2	6		8	3.5		1	7
Pepper, black, cracked	9	9	11			6			4		
Pepper, black, whole	12	9	11							3	
Pepper, white	11	8.5	1.3					3.5	6	1	2.5

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 10 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				17	18	19	20	21	22	23	24
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.2	
Na or K Nitrate	0.1	0	0								3
Na Erythorbate	0.1	0	0							0.87	
Spices											
Anise	10	16	18								1
Brandy, flavor	20	5	0								5
Garlic, Powder	6	1	17	4	1	0.5	0.5			2	
Ginger	9	4	8.5		1			1			
Mace	8	30	7			2					
Maple flavor	35	0	0								1.5
Nutmeg	8	33	7	4			2		2	2	
Pepper, white	11	8.5	1.3	5	4	7	7	4	4		
Pepper, white, cracked	11	8	10							5	

SALAMI, COOKED (Cotto, Beer)

Average Values

Section 11 of 16

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				25	26	27	28	29	30		
Curing Ingredients											
Na or K Nitrate	0.1	0	0	3	3	3	3				
Spices											
Cardamon	8	3.5	9	1	1			1			
Coriander	5	18	15					3			
Garlic, Powder	6	1	17	0.75				0.5	0.5		
Ginger	9	4	8.5						1.5		
Nutmeg	8	33	7					1	1.75		
Paprika	10	13	15						2		
Pepper black	11	8.5	12		7				8		
Pepper, black, cracked	9	9	11	7							
Pepper, black, whole	12	9	11					0.5			
Pepper, white	11	8.5	1.3			6	6	7			
Pepper, white, whole	11	8	10			2					

SALAMI, COOKED (Cotto, Beer)

Processing Procedures

Section 12 of 16

A.

1. Grind
2. Mix
3. Stuff
4. Hold, 18 hours, 38°F
5. Room temperature, 2 hours
6. Smoke
7. Cook to internal temperature of 153°F
8. Chill
9. Dip in hot water
10. Apply olive oil to surface

B.

1. Grind beef, 1/8"
2. Grind pork, 1/4"
3. Mix
4. Cure, 48 hours, 38°F
5. Stuff
6. Cooler, 48 Hours
7. Smoke
8. Cook to internal temperature of 152°F
9. Shower to internal temperature of 100°F
10. Chill

C.

1. Grind, 1/4"
2. Mix
3. Stuff
4. Chill, 24 hours
5. Smoke
6. Cook to internal temperature of 160°F

D.

1. Grind, 1/2", 1/8"
2. Mix
3. Stuff
4. Room temperature, till dry
5. Slow cook to 142°F internal temperature
6. Rinse, hot water
7. Shower
8. Room temperature, 2 hours
9. Chill

SALAMI, COOKED (Cotto, Beer)

Section 13 of 16

Processing Procedures

E.

1. Grind, fat beef and pork, 1/2", 3/16"
2. Grind, lean beef, 3/8", 1/4"
3. Mix
4. Stuff
5. Hold, 18 hours, 38°F
6. Room temperature, 2 hours
7. Smoke
8. Cook to internal temperature of 150°F
9. Shower
10. Room temperature, 2 hours
11. Store in cooler

F.

1. Grind, 1/2"
2. Mix
3. Grind, 3/16"
4. Stuff
5. Chill, 38°F, 24 hours
6. Smoke
7. Cook to internal temperature of 155°F
8. Shower
9. Room temperature, 1 hour
10. Store in cooler

G.

1. Grind and mix
2. Cure, 38°F
3. Stuff
4. Hold, 24 hours, 38°F
5. Cook to internal temperature of 140°F
6. Hot shower
7. Cold shower
8. Cool

H.

1. Grind
2. Chop
3. Hold, 12 hours, 40°F
4. Heat slowly to 150°F internal temperature

I.

1. Grind, 1/8", 3/16"
2. Mix
3. Cure, 38°F, 18 hours
4. Stuff
5. Medium smoke
6. Cook to internal temperature of 155°F
7. Shower
8. Room temperature, 1 hour

SALAMI, COOKED (Cotto, Beer)

Section 14 of 16

Processing Procedures

- J. 1. Dry cure meat, 5 days, 4 inch squares
2. Grind
3. Mix
4. Stuff
5. Room temperature, 3 hours
6. Smoke
7. Cook to internal temperature of 148°F
8. Cool
- K. 1. Grind
2. Dry cure, 3 days
3. Grind
4. Mix
5. Stuff
6. Room temperature, 3 hours
7. Smoke, 8 hours
8. Cook to internal temperature of 148°F
9. Shower
10. Cool
- L. 1. Grind
2. Cure, 38°F, 48 Hours
3. Mix
4. Grind
5. Stuff
6. Hold, 38°F, 24 hours
7. Smoke
8. Cook to internal temperature of 148°F
9. Chill
- M. 1. Chill, 38°F
2. Grind, 3/16"
3. Cube, fat, 1"
4. Mix
5. Chill, 38°F, 24 hours
6. Grind, 3/16"
7. Stuff
8. Smoke
9. Cook to internal temperature of 135°F
10. Steam cook to internal temperature of 152°F
11. Shower to internal temperature of 120°F
- N. 1. Grind
2. Mix
3. Stuff
4. Cook, 160°F, internal temperature of 140°F
5. Water cool, internal temperature of 90°F
6. Chill, 38°F

SALAMI, COOKED (Cotto, Beer)

Section 15 of 16

Processing Procedures

O.

1. Grind, 3/16"
2. Chop, 20 pounds, beef
3. Mix
4. Stuff
5. Smoke and cook to internal temperature of 150°F
6. Chill to 28°F
7. Slice

P.

1. Grind
2. Mix
3. Stuff
4. Hold, 18 hours, 40°F
5. Slow cook to 150°F internal temperature

Cooking Forms

Section 16 of 16

1. A 2-3/4" casing
2. A 3" beef middle
3. A 3" lined fibrous casing
4. Fibrous casing
5. A 1-7/8 high stretch cellulose casing
6. A 3 or 6 lb. oblong can
7. Chubs, no stretch cellophane
8. Weasands

SALAMI, DRY, SEMIDRY (Genoa, Milano, Nola, Sorrento)

Average Values

Section 1 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Cheek meat	70	20	18	59	14	48	20						
Chuck	66	16	18	30	24	38		75	70	65	50	40	40
Fat, brisket	5	93	1	95	0	0		25					
Plate	41	40	18	42	16	25			30				
Pork													
Backfat	5	93	1	95	0	0				35		30	
Butt	57	29	13	27	16	15							20
Trim 80 (lean)	60	23	16	25	16	25	60					30	
Trim 50	36	52	10	34	12	9					50		
Trim Reg	34	58	8	36	10	8	20						40
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0				1	1	1	
Dextrose	.06	0	0	0	10	0	0.1						0.4
Salt	.01	0	0	0	40	0	3.4	3	3	3.4	3.4	3.4	3.4
Sugar (sucrose)	.06	0	0	0	10	0	0.1	0.4	0.4				0.4
Moist Ingredients													
Water or ice	100	0	0	0	0	0		4	4				
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.06				0.06	
Calculated composition 20% shrink													
Moisture							43.5	38.7	47.7	28.5	36.1	30.0	36.7
Fat							*35.5	*41.0	27.0	*51.4	*40.7	*49.3	*42.5
Protein							17.9	15.9	20.9	14.4	16.8	14.7	15.6
Properties													
% Collagen (Max. 35)							34.4	31.4	33.7	31.9	31.4	29.7	30.9
Bind Points (Min. 1.8)							2.7	3.8	4.5	3.4	3.3	2.9	2.9
Color Points (Min. 2)							5.1	5.9	7.1	5.3	5.3	4.7	4.1

SALAMI, DRY, SEMIDRY (Genoa, Milano, Nola, Sorrento)

Average Values

Section 2 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I	J	K	L	M	N
Meat block													
Beef													
Chuck	66	16	18	30	24	38	35	30	25	20	20	20	
Trim 90 (lean)	71	11	18	28	27	43							85
Pork													
Backfat	5	93	1	95	0	0	30		30	30			15
Trim 80 (lean)	60	23	16	25	16	25	35	50	45	50	45	40	
Trim Reg	34	58	8	36	10	8		20			35	40	
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0			1				0.4
Dextrose	.06	0	0	0	10	0		0.3				0.4	
Salt	.01	0	0	0	40	0	3	3	3.4	3	3.4	3.4	3.75
Sugar (sucrose)	.06	0	0	0	10	0		0.2			2	0.4	
Moist Ingredients													
Wine, sherry	85	0	0	0	0	10							1
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0						0.06	0.12
Calculated composition 20% shrink													
Moisture							30.6	43.3	28.9	40.1	36.8	35.9	48.7
Fat							*50.4	*33.7	*50.6	*51.7	*40.1	*42.7	27.7
Protein							14.8	18.1	14.4	14.4	16.1	15.8	18.4
Properties													
% Collagen (Max. 35)							29.3	27.9	28.6	28.4	28.6	29.1	28.6
Bind Points (Min. 1.8)							2.9	3.3	2.7	2.6	2.7	2.6	4.9
Color Points (Min. 2)							4.6	5.0	4.2	4.1	4.0	3.9	7.8

SALAMI, DRY, SEMIDRY (Genoa, Milano, Nola, Sorrento)

Average Values

Section 3 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P	O	R	S	T	U
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	85	25					
Pork													
Backfat	5	93	1	95	0	0	15	10	30	15	15		
Trim 80 (lean)	60	23	16	25	16	25		65	70	85	85	100	50
Trim Reg	34	58	8	36	10	8							50
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	0.4	1		0.4			
Dextrose	.06	0	0	0	10	0						0.6	0.2
Salt	.01	0	0	0	40	0	3.75	3.75	3.4	3.75	3.75	3	3.4
Starter culture	4	1	10	0	0	0						use	
Sugar (sucrose)	.06	0	0	0	10	0			0.25		0.4		0.2
Moist Ingredients													
Wine, sherry	85	0	0	0	0	10	1		0.8	1	1		
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.06			0.06			
Calculated composition 20% shrink													
Moisture							48.7	43.4	27.9	37.6	37.5	47.4	31.6
Fat							27.7	*32.2	*52.7	*39.8	*39.8	27.8	*48.8
Protein							18.4	17.9	13.8	16.3	16.3	19.3	14.5
Properties													
% Collagen (Max. 35)							28.6	26.4	26.8	25.8	25.8	25.0	28.6
Bind Points (Min. 1.8)							4.9	3.4	2.1	2.6	2.6	3.1	2.0
Color Points (Min. 2)							7.8	5.4	3.4	4.0	4.0	4.8	2.8

SALAMI, DRY, SEMIDRY (Genoa, Milano, Nola, Sorrento)

Average Values

Section 4 of 9

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25				
Na or K Nitrate	0.1	0	0					3	3	3	3
Spices											
Coriander	5	18	15					6	6		
Garlic, Powder	6	1	17	2	1	0.5		0.5			
Ginger	9	4	8.5		1		1				
Pepper black	11	8.5	12			4					
Pepper, black, whole	12	9	11	1						4	
Pepper, red	8	17	12							3	
Pepper, white	11	8.5	1.3	3	4		4	5	5		6
Pepper, white, cracked	11	8	10			2		2	2		
Pimiento, powder	8	17	12							2	

Average Values

Section 5 of 9

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13			
Curing Ingredients											
Na or K Nitrate	0.1	0	0	3	3	2.5	2.5	1			
Na Erythorbate	0.1	0	0			0.87	0.87	0.87			
Spices											
Garlic, Powder	6	1	17			0.2		0.5			
Ginger	9	4	8.5			1.6	1.6				
Pepper black	11	8.5	12					1			
Pepper, white	11	8.5	1.3	4		3	3	2			
Pepper, white, cracked	11	8	10	4							

SALAMI, DRY, SEMIDRY (Genoa, Milano, Nola, Sorrento) Section 6 of 9

Processing Procedures

A.

1. Grind, beef, 1/8"
2. Cube, pork, 1/2 pound, freeze
3. Grind, frozen pork, 3/16"
4. Mix
5. Cure, 38°F, 48 hours
6. Stuff
7. Loop with twine every 6 inches
8. Cure, 70°F, 70% RH, 48 hours
9. Chill, 50°F, 75% RH, 75 days

B.

1. Grind, beef, 1/8"
2. Cube, pork, 1/2 pound, freeze
3. Grind, frozen pork, 3/16"
4. Mix
5. Cure, 38°F, 48 hours
6. Stuff
7. Store in 50° brine, 36°F, 2 days
8. Dip, hot water, 3 seconds
9. Cure, 70°F, 70% RH, 48 hours
10. Chill, 50°F, 75% RH, 75 days

C.

1. Grind
2. Mix
3. Cure, 38°F
4. Stuff
5. Green room, 57°F, 36 hours
6. Dry room, 50°F, 74% RH, 60 days

D.

1. Grind
2. Mix
3. Cure, 48 hours, 38°F
4. Chop
5. Stuff
6. Dry, 24 hours, 50°F
7. Smoke
8. Cook
9. Dry room, 50°F, 15 days

SALAMI, DRY, SEMIDRY (Ginoa, Milano, Nola, Sorrento) Section 7 of 9

Processing Procedures

E.

1. Medium fine grind
2. Cure
3. Stuff
4. Cool smoke
5. Dry room, 45°F, 20 day

F.

1. Grind
2. Mix
3. Cure, 38°F
4. Mix
5. Stuff
6. Spray wash
7. Green room, 58°F, 24 hours
8. Dry room 48°F, 75% RH, 60 days
9. Dip in parafin (optional)

G.

1. Coarse grind
2. Mix
3. Cure
4. Stuff
5. Cold smoke
6. Green room, 57°F, 36 hours
7. Dry room, 45°F, 20 days

H.

1. Chill, meat, 30°F
2. Grind, beef, 1/8"
3. Grind, pork, 3/8"
4. Cube, backfat, 3/4", freeze
5. Mix
6. Grind, 1/8"
7. Cure, 38°F, 72 hours
8. Stuff, loop with string, every 3"
9. Cure, 70°F, 75% RH, 4 days
10. Smoke
11. Cure, 70°F, 75% RH
12. Smoke (optional) 80°F, 70% RH
13. Dry, 55°F, 70% RH, 90 days

SALAMI, DRY, SEMIDRY (Ginoa, Milano, Nola, Sorrento) Section 8 of 9

Processing Procedures

I.

1. Chill, meat, 30°F
2. Grind, beef, 1/8"
3. Grind, pork, 3/8"
4. Cube, backfat, 3/4", freeze
5. Mix
6. Grind, 1/8"
7. Cure, 38°F, 72 hrs
8. Stuff, loop with string 3"
9. Cure, 70°F, 75% RH, 4 days
10. Dry, 45°F, 70% RH, 90 days

J.

1. Grind
2. Mix
3. Cure, 38°F
4. Stuff
5. Green room, 57°F, 36 hours
6. Dry room, 45°F, 20 days

K.

1. Chill, 30°F
2. Grind
3. Mix
4. Stuff
5. Ferment, 80°F, 85% RH, to pH 4.9
6. Dry, 65°F, 85% RH

Cooking Forms

Section 9 of 9

1. A 3-1/2" hog bung
2. Protein lined casing
3. Cloth casing
4. Sewed beef middles
5. Defatted hog bung
6. Export hog bung

SALAMI, FRESH, SMOKED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Beef												
Heart	70	13	17	27	6	40	20					
Trim 80	63	20	17	30	24	39	60					
Pork												
Backfat	5	93	1	95	0	0	20					
Dry Ingredients												
Dextrose	.06	0	0	0	10	0	0.6					
Salt	.01	0	0	0	40	0	3					
Sugar (sucrose)	.06	0	0	0	10	0	0.6					
Fruit & Vegetables												
Garlic, fresh	61	0	6	0	0	0	0.1					
Calculated composition 3% shrink												
Moisture							49.2					
Fat							*32.8					
Protein							13.6					
Properties												
% Collagen (Max. 35)							30.3					
Bind Points (Min. 1.8)							2.6					
Color Points (Min. 2)							5.3					

SALAMI, FRESH, SMOKED

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrate	0.1	0	0	3							
Spices											
Cardamon	8	3.5	9	1							
Coriander	5	18	15	2							
Nutmeg	8	33	7	1							
Pepper, white	11	8.5	1.3	7							

Processing Procedure

Section 3 of 4

A.

1. Grind, meat
2. Mix
3. Cure, 38°F
4. Stuff
5. Hold, 48 hours, 38°F
6. Dry, room temperature, 8 hours
7. Smoke, 24 hours, 100°F
8. Dip, 100° salt brine, 200°F, 4 seconds
9. Cool
10. Store, 50°F

Cooking Form

Section 4 of 4

1. Hog casing

SALAMI, ITALIAN

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
							A	B						
Meat block														
Beef														
Chuck	66	16	18	30	24	38	30							
Trim 90 (lean)	71	11	18	28	27	43		30						
Pork														
Backfat	5	93	1	95	0	0		20						
Trim 80 (lean)	60	23	16	25	16	25	50	50						
Trim Reg	34	58	8	36	10	8	20							
Dry Ingredients														
Dextrose	.06	0	0	0	10	0	0.4							
Salt	.01	0	0	0	40	0	3.4	2.7						
Sugar (sucrose)	.06	0	0	0	10	0	0.4	0.5						
Moist Ingredients														
Wine, sherry	85	0	0	0	0	10	2							
Fruit & Vegetables														
Garlic, fresh	61	0	6	0	0	0	0.06							
Lemon	90	0	1	0	0	0	0.06							
Calculated composition 12% shrink														
Moisture							48.8	43.9						
Fat							29.8	*36.8						
Protein							16.0	14.9						
Properties														
% Collagen (Max. 35)							28.0	27.4						
Bind Points (Min. 1.8)							2.9	3.0						
Color Points (Min. 2)							4.5	4.8						

SALAMI, ITALIAN

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrate	0.1	0	0	3	3						
Spices											
Cloves	7	22	6	1							
Coriander	5	18	15	2							
Pepper, white	11	8.5	1.3	5.5	4						
Pepper, white, whole	11	8	10		4						

Processing Procedure

Section 3 of 4

A.

1. Grind, beef, 3/8"
2. Regrind, beef, 1/8"
3. Grind, pork, 3/8"
4. Mix
5. Cure, 40°F
6. Stuff
7. Dry, 36 hours
8. Dry, 50°F, 10 weeks

Cooking Forms

Section 4 of 4

1. Hog bung
2. Synthetic casing

SALEICCA, NAPOLI

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	33						
Pork													
Trim 80 (lean)	60	23	16	25	16	25	33						
Trim Reg	34	58	8	36	10	8	34						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	0.1						
Salt	.01	0	0	0	40	0	3.4						
Sugar (sucrose)	.06	0	0	0	10	0	0.1						
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.06						
Pimiento	92	1	1	0	0	60	0.2						
Calculated composition 10% shrink													
Moisture							46.0						
Fat							*34.9						
Protein							14.9						
Properties													
% Collagen (Max. 35)							29.3						
Bind Points (Min. 1.8)							2.7						
Color Points (Min. 2)							4.1						

SALEICCA, NAPOLI

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrate	0.1	0	0	3							
Spices											
Pepper, red	8	17	12	3							
Pepper, white	11	8.5	1.3	4							

Processing Procedure

Section 3 of 4

1. Grind
2. Mix
3. Cure
4. Stuff
5. Air dry

Cooking Form

Section 4 of 4

1. Artificial casing

SALISBURY STEAK

Average Values

Section 1 of 4

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							A	B	C	D	E	F
Beef												
Chuck	66	16	18	30	24	38	60	60	60			
Flank	43	42	13	24	12	20	40	40	40			
Trim 90 (lean)	71	11	18	28	27	43				100		
Trim 75	58	25	16	38	22	34					100	100
Dry Ingredients												
Non-fat dry milk	3	1	38	0	25	0	3	2.6	2.5	3	3.5	
Peanut grit	5	48	26	0	18	0					5	
Salt	.01	0	0	0	40	0	1.3	1.2	1	2.5	1.4	1.3
Soy protein concentrate	8	0	75	0	45	0				2.5		
Textured veg. protein	8	1	50	0	35	0	15	9	5			14
Wheat, fines	12	2	12	0	18	0					2	
Moist Ingredients												
Water or ice	100	0	0	0	0	0	30	18	10	15	20	40
Worcestershire sauce	62	1	6	0	0	90		0.03				
Fruit & Vegetables												
Garlic, fresh	61	0	6	0	0	0		0.02			0.02	
Onion	89	0	1	0	0	0			5	5		
Pepper, green	93	0	1	0	0	0	2.5	2.5			0.02	
Tomato puree	87	0	2	0	0	70					5	
Calculated composition 1% shrink												
Moisture							59.2	60.1	57.4	70.6	62.3	63.5
Fat							17.7	17.1	20.5	8.7	19.2	16.4
Protein							16.4	15.9	16.6	16.6	13.5	15.0
Properties												
% Collagen (Max. 35)							18.2	18.2	20.9	23.9	33.2	26.4
Bind Points (Min. 1.8)							4.1	3.9	3.9	4.7	3.0	4.1
Color Points (Min. 2)							3.4	3.3	3.9	6.1	4.1	3.5

SALISBURY STEAK

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Spices											
Garlic (Powder)	6	1	17	0.3							
Lemon flavor	20	5	0	0.8							
Pepper black	11	8.5	12	0.6	4.2						
Pepper, red	8	17	12	0.3							

Processing Procedures

Section 3 of 4

A.

1. Grind, 3/16"
2. Mix
3. Regrind, 3/16"
4. Mix
5. Form into steaks
6. Sell fresh or frozen

B.

1. Rehydrate vegetable protein, 15 minutes
2. Place on meat
3. Grind, 1/2"
4. Mix

Cooking Forms

Section 4 of 4

1. Formed

SANDWICH SPREAD

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B					
Meat block													
Other Meats or Mixtures or Undesignated													
Bologna, broken	56	30	12	31	8	20	100						
Salami, rework	50	32	16	31	8	20		100					
Dry Ingredients													
Cracker meal	4	13	9	0	15	0	5	5					
Sugar (sucrose)	.06	0	0	0	10	0	2	2					
Moist Ingredients													
Salad dressing	41	42	1	0	0	0	10	10					
Calculated composition 1% shrink													
Moisture							51.0	45.9					
Fat							*30.1	*31.8					
Protein							10.8	14.3					
Properties													
% Collagen (Max. 35)							29.7	29.9					
Bind Points (Min. 1.8)							*0.9	*1.2					
Color Points (Min. 2)							2.1	2.8					

SANDWICH SPREAD

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Spices											
Allspice	8.5	8.7	6	2							
Mustard, prepared, hot	80	4	5	4							
Vinegar, 50 grain	94	0	0	90							

Processing Procedures

Section 3 of 4

1. Grind, 3/16"
2. Mix

Cooking Forms

Section 4 of 4

1. Pan

SAUCE

Average Values

Section 1 of 5

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Beef													
Trim 90 (lean)	71	11	18	28	27	43	20						
Tripe, fresh	82	10	9	100	0	0	10						
Pork													
Cheek meat	67	15	17	72	9	29		20	17				
Feet, meat	67	15	17	55	20	20				use	use		
Ham, trim	70	9	19	27	17	20		15	17				
Head meat	65	16	17	70	7	16				use		use	
Lips	71	14	15	90	1	1		10	16				
Skin	40	32	28	99	6	1	20						10
Snout	45	40	14	80	2	1	50	20	22				40
Tongue	63	19	17	66	8	36		35	28				50
Dry Ingredients													
Cheese, cheddar	37	32	25	0	0	1		4					
Dextrose	.06	0	0	0	10	0			0.25				
Gelatin	13	0	85	0	20	0	4	3.5	1				3
MSG	0	0	0	0	0	0						0.25	0.25
Salt	.01	0	0	0	40	0		1.5	0.1		use	use	3
Sugar (sucrose)	.06	0	0	0	10	0					use		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	26		6				2
Fruit & Vegetables													
Pickle, sweet	61	1	1	0	0	0		6.5	12				10
Pimiento	92	1	1	0	0	60		3.5	3				
Calculated composition 10% shrink													
Moisture							54.8	55.3	60.1				47.1
Fat							25.3	20.3	18.7				27.1
Protein							17.5	19.2	15.8				18.4
Properties													
% Collagen (Max. 35)							*63.7	*52.2	*61.6				*65.7
Bind Points (Min. 1.8)							1.8	1.8	*1.3				*1.4
Color Points (Min. 2)							*1.4	3.5	2.9				2.9

SAUCE

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r		Pounds for Various Formulations						
Meat block							H							
Pork														
Snout	45	40	14	80	2	1	50							
Tongue	63	19	17	66	8	36	50							
Dry Ingredients														
Gelatin	13	0	85	0	20	0	3							
Salt	.01	0	0	0	40	0	0.5							
Moist Ingredients														
Water or ice	100	0	0	0	0	0	20							
Fruit & Vegetables														
Pepper, sweet	93	0	1	0	0	0	2							
Calculated composition 10% shrink														
Moisture							56.4							
Fat							26.1							
Protein							15.9							
Properties														
% Collagen (Max. 35)							*62.4							
Bind Points (Min. 1.8)							*1.2							
Color Points (Min. 2)							2.8							

SAUCE

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6		
Curing Ingredients											
Na Erythorbate	0.1	0	0	0.87							
Spices											
Caraway	10	15	20	2							
Cayenne	8	17	12		0.5						
Cloves	7	22	6	2		2					
Garlic, Powder	6	1	17	2							
Mustard seed, ground	6	24	30	2	2	2					
Onion powder	5	1	10	2		2	0.5				
Parsley	85	1	4		0.5						
Pepper black	11	8.5	12					use			
Pepper, red	8	17	12	32				use	160		
Pepper, white	11	8.5	1.3	4		4	8				
Sage	3	14	8.5	2		2		use			
Vinegar, 90 gr.	94	0	0	48		32	16	48	128		

SAUCE

Section 4 of 5

Processing Procedures

A.

1. Cure for meat

10 gallon water
10 pounds salt
3 pounds sugar
2 pounds nitrite and nitrate

B.

1. Pickle to store meat

Meat broth
Vinegar
Whole peppers

C.

1. Cook meat in salt water
2. Bone, grind
3. Season
4. Mix
5. Place in mold and cover with pickle
6. Store, 36°F

D.

1. Cure meat
2. Cook meat in nets
3. Wash off grease
4. Grind, coarse
5. Mix
6. Stuff
7. Pour in gelatin
8. Cook at 160°F, 15 minutes
9. Cool in water

E.

1. Cure, meat
2. Cook, in nets, 2 hours
3. Cool
4. Grind
5. Mix, add 10% stock
6. Mold
7. Ice water chill, 2 hours
8. Chill, 34°F, 12 hours
9. Remove from mold
10. Chill, 38°F, 18 hours

Cooking Forms

Section 5 of 5

1. Mold
2. Loaf pan

SAUERBRATEN

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C				
Meat block													
Beef													
Fat	5	94	1	95	0	0	8						
Round	73	5	21	20	27	45	92	100	100				
Dry Ingredients													
Flour, all purpose	12	1	10	0	20	0	4						
Ginger snap	3	9	5	0	10	0	3						
Salt	.01	0	0	0	40	0	1	1	0.5				
Starch	12	1	0	0	30	0			5				
Sugar, brown	2	0	0	0	0	0			7				
Sugar (sucrose)	.06	0	0	0	10	0	1.5	1					
Moist Ingredients													
Cream, light	62	31	2	0	0	0			6				
Oil	0	100	0	0	0	0			7				
Water or ice	100	0	0	0	0	0	35	8	70				
Wine, sherry	85	0	0	0	0	10	8		3.5				
Fruit & Vegetables													
Carrot	88	0	1	0	0	15			7				
Celery, fresh diced	94	0	1	0	0	0			6				
Garlic, fresh	61	0	6	0	0	0		6					
Onion	89	0	1	0	0	0	2	6	6.5				
Calculated composition 10% shrink													
Moisture							*69.2	70.8	*74.3				
Fat							8.9	4.6	7.1				
Protein							14.4	19.5	10.8				
Properties													
% Collagen (Max. 35)							19.3	19.6	20.3				
Bind Points (Min. 1.8)							3.8	5.2	2.9				
Color Points (Min. 2)							6.3	8.6	4.8				

SAUERBRATEN

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1	2	3				
Spices										
Bay leaves	5	8	8	2	2					
Cinnamon	10	3	4	2						
Cloves	7	22	6	0.25	0.25					
Garlic, Powder	6	1	17		3					
Ginger	9	4	8.5	2						
Onion Powder	5	1	10		7					
Pepper black	11	8.5	12	2		3				
Pepper, white	11	8.5	1.3	2	3					
Rosemary	9	15	5		4					
Thyme	8	7	9		1.5	0.3				
Vinegar, wine	94	0	0	300	224	96				

Processing Procedure

Section 3 of 4

- A.
1. Place meat and marinade in wooden barrel
 2. Store for 6 days
 3. Brown meat in fat in oven
 4. Strain marinade, add 48 pounds to meat
 5. Cover, simmer, 3 hours
 6. Remove meat from juice
 7. Simmer meat in flour and fat, 10 minutes
 8. Cook marinade, add ginger snap
 9. Slice beef
 10. Add gravy

Cooking form

Section 4 of 4

1. Pan

SAUSAGE

Average Values

Section 1 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Chuck	66	16	18	30	24	38	30						
Cow F.C.	68	14	18	21	24	39		25	25				
Flank	43	42	13	24	12	20				50	40		
Heart	70	13	17	27	6	40						25	
Plate	41	40	18	42	16	25							60
Tripe, fresh	82	10	9	100	0	0					30	25	
Pork													
Check meat	67	15	17	72	9	29	20						10
Jowl, skinned	24	71	5	43	5	2							20
Skin	40	32	28	99	6	1							10
Trim 80 (lean)	60	23	16	25	16	25	50					25	
Trim 50	36	52	10	34	12	9		75		50			
Trim Reg	34	58	8	36	10	8			75		30	25	
Dry Ingredients													
Cereal flour	12	1	10	0	18	0						2	
Corn syrup solids	3.5	0	0	0	5	0		1	2			1	
Dextrose	.06	0	0	0	10	0						0.25	
MSG	0	0	0	0	0	0		0.06		0.25			
Non-fat dry milk	3	1	38	0	25	0	5				1.5	2	
Oatmeal	8	7	14	0	15	0							12
Rye flour	11	2	12	0	16	0							3
Salt	.01	0	0	0	40	0	3	2.5	2.5	3	2	2.5	2.5
Sugar (sucrose)	.06	0	0	0	10	0					1		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	6	7	15			15	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0		0.15					
Onion	89	0	1	0	0	0			4				
Potato, fresh	80	0	2	0	0	0				50			
Calculated composition 15% shrink													
Moisture							53.9	37.2	40.6	43.4	40.9	56.0	23.8
Fat							19.9	*44.1	*44.8	*36.1	*41.9	25.0	*43.9
Protein							19.3	13.3	10.0	9.6	12.2	12.9	18.4
Properties													
% Collagen (Max. 35)							32.4	28.4	29.6	26.1	*44.4	*38.0	*48.8
Bind Points (Min. 1.8)							3.5	2.6	1.6	*1.1	*1.1	*1.3	2.4
Color Points (Min. 2)							5.2	3.2	2.1	*1.3	*1.4	2.7	3.2

SAUSAGE

Average Values

Section 2 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Beef													
Plate	41	40	18	42	16	25	19						
Trim 90 (lean)	71	11	18	28	27	43		70	30	15	14		
Trim 70	55	30	15	39	20	31						36	33
Pork													
Backfat	5	93	1	95	0	0	15	30			28	24	
Cheek meat	67	15	17	72	9	29				15			
Head meat	65	16	17	70	7	16	10						
Rind emulsion	38	34	27	60	1	0	7					6	
Trim 80 (lean)	60	23	16	25	16	25	18		70	50	58	34	
Trim 50	36	52	10	34	12	9	31						67
Trim Reg	34	58	8	36	10	8				20			
Dry Ingredients													
Cereal flour	12	1	10	0	18	0							3
Non-fat dry milk	3	1	38	0	25	0	1.5				20	10	
Rusk	5	9	14	0	16	0	15						
Salt	.01	0	0	0	40	0	2	2.3	3	3	2	2.5	2
Soy protein concentrate	8	0	75	0	45	0	3					1	
Sugar (sucrose)	.06	0	0	0	10	0			0.5	0.5			
Moist Ingredients													
Water or ice	100	0	0	0	0	0	25		15	10	32	10	3
Calculated composition 15% shrink													
Moisture							35.1	41.2	60.1	52.3	42.8	42.8	32.1
Fat							*37.9	*40.9	19.3	27.9	*32.6	*36.3	*48.8
Protein							14.5	14.8	16.5	15.4	11.4	12.3	13.0
Properties													
% Collagen (Max. 35)							31.4	29.6	25.9	34.8	22.1	31.4	*35.3
Bind Points (Min. 1.8)							2.4	3.9	3.2	2.5	1.9	2.1	2.0
Color Points (Min. 2)							*1.7	6.2	5.1	4.2	2.6	2.5	2.3

SAUSAGE

Average Values

Section 3 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							O	P	O	R	S	T	U
Beef													
Trim 70	55	30	15	39	20	31	33	25					
Trim 65	50	35	14	39	18	28			40	40	25	13	12
Pork													
Backfat	5	93	1	95	0	0							7
Trim 80 (lean)	60	23	16	25	16	25					75	75	70
Trim 50	36	52	10	34	12	9	67		60	60			
Trim 15 (fat)	11	85	3	60	3	1						12	11
Trim Reg	34	58	8	36	10	8		25					
Other Meats or Mixtures or Undesignated													
Rabbit	70	8	21	35	18	17		50					
Dry Ingredients													
Dextrose	.06	0	0	0	10	0			1.75	0.4		0.4	0.4
MSG	0	0	0	0	0	0					0.3		
Non-fat dry milk	3	1	38	0	25	0	3			3.5	3.5		
Salt	.01	0	0	0	40	0	2	2.5	2.75	2.6	2.6	3	3
Sugar (sucrose)	.06	0	0	0	10	0				1	1		
Moist Ingredients													
Water or ice	100	0	0	0	0	0	3		10	20	15		
Fruit & Vegetables													
Onion	89	0	1	0	0	0							0.1
Calculated composition 15% shrink													
Moisture							31.8	48.1	35.4	39.3	52.1	42.4	38.8
Fat							*48.8	29.8	*46.4	*41.7	25.0	*36.4	*41.1
Protein							13.9	18.7	11.9	11.9	15.3	16.1	15.1
Properties													
% Collagen (Max. 35)							32.9	*35.9	*36.5	32.8	28.2	27.7	28.0
Bind Points (Min. 1.8)							2.3	3.3	1.8	1.9	2.8	2.6	2.4
Color Points (Min. 2)							2.3	3.6	2.2	1.9	3.8	3.9	3.7

SAUSAGE

Average Values

Section 4 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							V	W	X	Y	Z	AA	AB
Meat block													
Beef													
Trim 50	38	50	11	42	12	19	40	40	30				
Tripe, fresh	82	10	9	100	0	0				30	25	25	
Veal													
Lean	69	10	19	27	26	30							75
Pork													
Backfat	5	93	1	95	0	0							25
Cheek meat	67	15	17	72	9	29					25		
Tongue	63	19	17	66	8	36						25	
Trim 80 (lean)	60	23	16	25	16	25			40		25	25	
Trim 50	36	52	10	34	12	9						25	
Trim Reg	34	58	8	36	10	8			30	70	25		
Other Meats or Mixtures or Undesignated													
Elk	71	8	21	20	30	48	60						
Venison	71	8	21	20	30	48		60					
Dry Ingredients													
Cereal flour	12	1	10	0	18	0				2	2	2	
Corn syrup solids	3.5	0	0	0	5	0					1		
Dextrose	.06	0	0	0	10	0					0.25	0.25	0.2
MSG	0	0	0	0	0	0						0.06	
Non-fat dry milk	3	1	38	0	25	0				1.5	2	2	
Salt	.01	0	0	0	40	0	3.1	3.1	2.5	2	2.5	2.5	2
Sugar (sucrose)	.06	0	0	0	10	0	1	1	0.5	0.2			0.2
Moist Ingredients													
Water or ice	100	0	0	0	0	0	14	14		9	15	15	
Fruit & Vegetables													
Onion	89	0	1	0	0	0				1	4		
Calculated composition 15% shrink													
Moisture							53.9	67.4	34.4	41.9	56.3	55.3	43.2
Fat							24.7	24.7	*47.5	*44.3	24.6	25.6	35.3
Protein							16.9	16.9	13.8	9.2	12.5	12.9	16.7
Properties													
% Collagen (Max. 35)							25.7	25.7	31.9	*52.1	*52.1	*51.7	28.1
Bind Points (Min. 1.8)							4.3	4.3	1.9	*0.8	*1.3	*1.5	4.3
Color Points (Min. 2)							6.9	6.9	2.8	*0.5	2.2	2.7	4.9

SAUSAGE

Average Values

Section 5 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							AC	AD	AE	AF	AG	AH	AI
Meat block													
Pork													
Cheek meat	67	15	17	72	9	29	30	25					
Heart	70	13	17	27	6	40			30	25			
Picnic	59	25	16	33	20	16					40		
Shank	69	9	21	55	20	25						40	
Tongue	63	19	17	66	8	36							30
Trim 80 (lean)	60	23	16	25	16	25	30	25	30	25	20	20	30
Trim 50	36	52	10	34	12	9		25		25			
Trim Reg	34	58	8	36	10	8	40		40		40	40	40
Tripe	74	15	10	100	0	0		25		25			
Dry Ingredients													
Cereal flour	12	1	10	0	18	0		2		2			
Corn Syrup solids	3.5	0	0	0	0	0					1	1	
Dextrose	.06	0	0	0	10	0	0.25	0.25	0.25	0.25			2.5
Non-fat dry milk	3	1	38	0	25	0		2		2			
Salt	.01	0	0	0	40	0	2.4	2.5	2.5	2.5	2.5	2.5	2.5
Moist Ingredients													
Water or ice	100	0	0	0	0	0	10	15	10	15	10	10	10
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0				0.15			
Onion	89	0	1	0	0	0		4					
Calculated composition 15% shrink													
Moisture							46.8	55.4	48.6	55.8	43.8	47.9	45.5
Fat							*36.1	24.6	*34.5	24.2	*39.2	*32.5	*37.4
Protein							13.7	13.3	13.0	13.2	13.3	15.3	13.7
Properties													
% Collagen (Max. 35)							*45.9	*52.0	28.6	*39.1	26.8	*44.4	*43.5
Bind Points (Min. 1.8)							*1.6	*1.5	*1.4	*1.3	2.2	2.6	*1.6
Color Points (Min. 2)							3.1	2.3	3.0	2.3	2.2	3.3	3.4

SAUSAGE

Average Values

Section 6 of 13

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							AJ	AK					
Pork													
Trim 80 (lean)	60	23	16	25	16	25	100						
Trim Reg	34	58	8	36	10	8		34					
Other Meats or Mixtures or Undesignated													
Rabbit	70	8	21	35	18	17		66					
Dry Ingredients													
MSG	0	0	0	0	0	0		0.3					
Salt	.01	0	0	0	40	0	2.5	2.5					
Calculated composition 15% shrink													
Moisture							51.2	48.5					
Fat							26.4	28.6					
Protein							18.4	18.9					
Properties													
% Collagen (Max. 35)							24.9	*35.3					
Bind Points (Min. 1.8)							2.9	3.2					
Color Points (Min. 2)							4.6	2.9					

SAUSAGE

Average Values

Section 7 of 13

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	2	2	1	1	1	1	1	1
Na Ascorbate	0.1	0	0			0.87	0.87	0.87	0.87	0.87	0.87
Spices											
Allspice	8.5	8.7	6			0.1	0.1				
Caraway seeds	10	15	20	1	1			0.5	0.5		
Cardamon	8	3.5	9	1	1						
Coriander	5	18	15	3	3			1	1		
Fennel seed ground	8	22	18					1	1	1.7	
Garlic, Powder	6	1	17	0.25				0.12		0.12	
Ginger	9	4	8.5			0.2	0.2				
Mace	8	30	7			0.2					
Mustard seed, ground	6	25	31								
Nutmeg	8	33	7	2	2		0.2	0.5	0.5		
Paprika	10	13	15							1	
Pepper black	11	8.5	12					2.5	2.5	2.5	
Pepper, red	8	17	12					2	2		
Pepper, white	11	8.5	1.3	5	5	2	2				4

SAUSAGE

Average Values

Section 8 of 13

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14	15	16
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.2
Na or K Nitrate	0.1	0	0	1	1						
Na Erythorbate	0.1	0	0	0.87	0.87	0.87				0.87	0.87
Spices											
Allspice	8.5	8.7	6			0.5	2				
Anise	10	16	18							2	
Cinnamon	10	3	4					0.5	0.5		
Cloves	7	22	6					0.75	0.75		
Coriander	5	18	15	2		1					
Fennel seed ground	8	22	18		1.7					4	
Garlic, Powder	6	1	17			0.1					
Liquid smoke	80	0	0								5
Maple flavor	35	0	0					2.5	2.5		
Mustard seed, ground	78	29	25	2							4
Nutmeg	8	33	7				2			2	
Onion powder	5	1	10				8				
Paprika	10	13	15		1		4			1	8
Pepper black	11	8.5	12		2.5	1.5					
Pepper, red	8	17	12							5	
Pepper, white	11	8.5	13	7		1.5	4	6	6		4
Pimiento, juice	95	1	1					2			

SAUSAGE

Average Values

Section 9 of 13

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				17	18	19	20	21	22	23	24
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.12							
Na or K Nitrate	0.1	0	0	3							
Spices											
Allspice	8.5	8.7	6		2	2	2				
Caraway seeds	10	15	20					1	1		
Celery seed	6	25	18					1.5	1.5		
Coriander	5	18	15					1	1	2	2
Mace	8	30	7							1.5	
Nutmeg	8	33	7								1.5
Onion powder	5	1	10		1.75						
Paprika	10	13	15	2				1	1		
Pepper, red	8	17	12	4						1	1
Pepper, white	11	8.5	1.3		8	8	5	6	6	6	6
Pimiento, juice	95	1	1					4.8			
Pimiento, powder	8	17	12						4		
Sage	3	14	8.5	1							

SAUSAGE

Average Values

Section 10 of 13

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat								
				25	26	27	28	29				
Spices												
Ginger	9	4	8.5	2	1	1						
Mace	8	30	7	2			1.25					
Marioram	4	7	11				0.3					
Nutmeg	8	33	7	2	0.75		0.6	1.8				
Paprika	10	13	15			2						
Pepper, red	8	17	12			2						
Pepper, red, cracked	8	17	12			1						
Pepper, white	11	8.5	1.3	3.4	5		12.5	5.5				
Sage	3	14	8.5	2	2	3	1.25	1				
Thyme	8	7	9		1	1	0.15					

SAUSAGE

Section 11 of 13

Processing Procedures

A.

1. Grind
2. Mix
3. Cure, 18 hours, 38°F
4. Room temperature, 1 hour
5. Smoke
6. Cook to internal temperature of 155°F

B.

1. Grind
2. Mix
3. Stuff
4. Scald, 212°F, 2 minutes
5. Chill

C.

1. Cure meat
2. Grind
3. Mix
4. Add, cubed backfat
5. Cook, 3.5 hours, 165°F
6. Chill

D.

1. Boil, meat, 2 hours
2. Strain, stock
3. Cook, oatmeal and flour in stock, 2 hours
4. Grind, meat
5. Mix
6. Stuff
7. Cook, 160°F, 40 minutes

E.

1. Grind, 1/4"
2. Mix
3. Cure, 38°F, 18 hours
4. Slow smoke, 90°F

F.

1. Grind
2. Mix
3. Stuff
4. Store under salt water

SAUSAGE

Section 12 of 13

Processing Procedures

G.

1. Grind, pork, 1/4"
2. Grind, beef, 1/8"
3. Mix
4. Stuff
5. Smoke, 2 hours, 190°F
6. Water cook, 160°F to internal temperature of 150°F
7. Water cool to internal temperature of 90°F
8. Chill, 36°F

H.

1. Grind, 1/8"
2. Chop
3. Mix
4. Cure, 36°F, 18 hours
5. Mix
6. Stuff
7. Dry
8. Heavy smoke
9. Cook to internal temperature of 152°F
10. Shower to internal temperature of 110°F
11. Chill to internal temperature of 45°F

Cooking Forms

Section 13 of 13

1. A 28-32 mm hog casing
2. A 22-32 mm cellophane casing, 4" length
3. Artificial casing
4. Beef bung, wrapped with twine

SAUSAGE, BEEF

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Fat	5	94	1	95	0	0	30	25					
Flank	43	42	13	24	12	20			100	16			
Navels	40	50	10	42	14	21				18			
Plate	41	40	18	42	16	25				16	100		
Trim 90 (lean)	71	11	18	28	27	43	70	75					
Trim 70	55	30	15	39	20	31				50		100	100
Pork													
Rind, emulsion	38	34	27	60	1	0	6						
Dry Ingredients													
Rusk	5	9	14	0	16	0	36	30				27	
Salt	.01	0	0	0	40	0	2	2.3	2	1.7	2	2	2
Soy protein concentrate	8	0	75	0	45	0						3.6	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	52	50	15	3	20	45	25
Fruit & Vegetables													
Olive	78	13	1	0	0	0						0.05	0.05
Calculated composition 2% shrink													
Moisture							*53.8	*57.3	48.5	47.8	48.9	56.4	*62.2
Fat							21.4	19.3	*36.6	*36.2	*33.5	18.6	24.1
Protein							10.2	10.0	11.3	13.9	15.1	12.3	12.0
Properties													
% Collagen (Max. 35)							24.4	22.5	24.1	*37.8	*41.9	27.3	*39.2
Bind Points (Min. 1.8)							2.2	2.4	*1.4	2.4	2.4	2.8	2.4
Color Points (Min. 2)							2.8	3.2	2.3	3.7	3.8	2.7	3.7

SAUSAGE, BEEF

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							H					
Beef												
Trim 70	55	30	15	39	20	31	38					
Pork												
Backfat	5	93	1	95	0	0	26					
Rind, emulsion	38	34	27	60	1	0	6					
Trim 80 (lean)	60	23	16	25	16	25	36					
Dry Ingredients												
Rusk	5	9	14	0	16	0	10					
Salt	.01	0	0	0	40	0	2.5					
Soy protein concentrate	8	0	75	0	45	0	1					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	10					
Calculated composition 2% shrink												
Moisture							43.7					
Fat							*36.9					
Protein							12.2					
Properties												
% Collagen (Max. 35)							31.5					
Bind Points (Min. 1.8)							2.1					
Color Points (Min. 2)							2.5					

SAUSAGE, BEEF

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1	2	3	4	5	6	7
Curing Ingredients										
Na or K Nitrate	0.1	0	0	2	2					
Spices										
Cayenne	8	17	12			0.5	0.5			
Ginger	9	4	8.5			1.2	1	1		
Mace	8	30	7			1.2	1			
Mustard seed, ground	6	25	31	2	2				2	2
Nutmeg	8	33	7			2.3	2			
Pepper, white	11	8.5	1.3	6	6	7	6	3	6	6
Sage	3	14	8.5	2				2	2	
Thyme	8	7	9					1		

Processing Procedures

Section 4 of 5

A.

1. Grind
2. Season
3. Grind
4. Cool, 32°F
5. Sell fresh

B.

1. Chill, meat, 32°F
2. Grind, meat, 1-1/2"
3. Mix
4. Re grind, 1/8"
5. Stuff
6. Link
7. Chill, 32°F

Cooking Forms

Section 5 of 5

1. Hog casing
2. Sheep casing
3. A 1 lb. artificial casing

SCRAPPLE

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Cheek meat	70	20	18	59	14	48	12	12					
Heart	70	13	17	27	6	40			12	12			
Plate	41	40	18	42	16	25					25		
Shank	71	7	21	48	28	46						12	12
Tripe, fresh	82	10	9	100	0	0	26		26			26	
Pork													
Head meat	65	16	17	70	7	16	62	62	62	62	25	62	62
Skin	40	32	28	99	6	1					12.5		
Snout	45	40	14	80	2	1					37.5		
Tripe	74	15	10	100	0	0		26		26			26
Other Meats or Mixtures or Undesignated													
Cooking broth	99	0	1	0	0	5	90	90	90	90		90	90
Dry Ingredients													
Corn meal, white	12	4	9	0	16	0					20		
Corn meal, yellow	12	4	9	0	16	5					20		
MSG	0	0	0	0	0	0	0.25				0.25		
Non-fat dry milk	3	1	38	0	25	0					10		
Salt	.01	0	0	0	40	0	3.5	3.7	3.5	3.7	3.75	3.5	3.5
Moist Ingredients													
Water or ice	100	0	0	0	0	0					use		
Calculated composition 7% shrink													
Moisture							*80.8	*79.6	*80.9	*79.6	29.8	*80.9	*79.8
Fat							8.3	9.0	7.8	8.5	24.2	7.4	8.1
Protein							8.8	8.9	8.8	8.9	17.4	9.1	9.2
Properties													
% Collagen (Max. 35)							*69.3	*70.2	*64.8	*65.7	*50.3	*66.7	*67.6
Bind Points (Min. 1.8)							*0.6	*0.6	*0.5	*0.5	2.0	*0.8	*0.8
Color Points (Min. 2)							*1.5	*1.5	*1.4	*1.4	*1.4	*1.6	*1.6

SCRAPPLE

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							H	I	J	K	L	
Meat block												
Pork												
Bones	10	30	18	0	0	0	use					
Cheek meat	67	15	17	72	9	29		34				
Head meat	65	16	17	70	7	16			use	100	67	
Liver	73	7	19	24	2	49	use				16	
Skin	40	32	28	99	6	1	use				17	
Snout	45	40	14	80	2	1		66	use			
Tongue	63	19	17	66	8	36	use					
Trim 15 (fat)	11	85	3	60	3	1	use					
Other Meats or Mixtures or Undesignated												
Bone	12	30	18	—	—	—	use					
Cooking broth	99	0	1	0	0	5					33	
Dry Ingredients												
Buck Wheat flour	12	2	12	0	18	2				9		
Corn meal, yellow	12	4	9	0	16	5	use	50	use	30	33	
Salt	.01	0	0	0	40	0	use	3	use	2.5	2	
Moist Ingredients												
Water or ice	100	0	0	0	0	0		use	use	200		
Calculated composition 7% shrink												
Moisture								33.6		*77.4	55.6	
Fat								23.5		5.5	11.9	
Protein								13.7		6.5	14.4	
Properties												
% Collagen (Max. 35)								*59.2		*57.3	*59.6	
Bind Points (Min. 1.8)								*1.0		*0.6	*1.0	
Color Points (Min. 2)								*1.4		*0.9	2.3	

I Water or ice is not used in the calculation of I

SCRAPPLE

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.15							
Spices											
Celery seed	6	25	18	0.6							
Mace	8	30	7		1.5	1.2	1.2				
Marjoram	4	7	11	0.6				8			
Nutmeg	8	33	7		1.2	1.2					
Onion chip, toasted	2	1	9	10							
Pepper black	11	8.5	12	5					use		
Pepper, red	8	17	12				0.75				
Pepper, white	11	8.5	1.3		8	7	10	12.5		7	7
Sage	3	14	8.5	1	5	4	2.75		use	4	

SCRAPPLE

Section 4 of 5

Processing Procedures

- A.
 - 1. Clean, hog head
 - 2. Cook, in water, till meat separates from bone
 - 3. Strain, broth
 - 4. Remove, bones
 - 5. Mash, meat
 - 6. Add, salt, pepper and sage to taste
 - 7. Boil
 - 8. Add, corn meal until thick
 - 9. Place in mold
 - 10. Cool, slice, fry until brown
- B.
 - 1. Cook, meat in nets, 160°F, till tender
 - 2. Grind, meat
 - 3. Skim, broth
 - 4. Add meat to portion of broth
 - 5. Add corn meal and milk in same broth
 - 6. Mix, meat and paste
 - 7. Cook, 3 hours, stirring
 - 8. Stuff
 - 9. Cool
- C.
 - 1. Cook, head in water
 - 2. Bone and chop
 - 3. Mix meat with 15 gallons of broth
 - 4. Mix
 - 5. Boil
 - 6. Add flour and meal
 - 7. Cook
 - 8. Place in pans
 - 9. Cool
 - 10. Slice and fry
- D.
 - 1. Boil in water
 - 2. Remove, bones
 - 3. Chop
 - 4. Strain, liquor, thicken with corn meal
 - 5. Boil
 - 6. Mix
 - 7. Boil
 - 8. Cool
 - 9. Serve cold or fry

Cooking Form

Section 5 of 5

- 1. Pans

SHOULDER, CURED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Pork												
Shoulder	58	27	14	25	18	15	100					
Dry Ingredients												
Salt	.01	0	0	0	40	0	8.5					
Sugar (sucrose)	.06	0	0	0	10	0	1.5					
Moist Ingredients												
Water or ice	100	0	0	0	0	0	46					
Calculated composition 4% shrink												
% Pump							10					
Moisture							*65.3					
Fat							18.0					
Protein							9.4					
Properties												
% Collagen (Max. 35)							25.0					
Bind Points (Min. 1.8)							*1.7					
Color Points (Min. 2)							*1.4					

SHOULDER, CURED

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat						
				1						
Curing Ingredients										
Na or K Nitrite	0.1	0	0	1.5						

Processing Procedures

Section 3 of 4

- A.
1. Mix, dry ingredients in water
 2. Chill, shoulder, 38°F
 3. Pump, 10%
 4. Place in vat, cover with brine
 5. Cure, 38°F, 6 days
 6. Shower
 7. Stockinette
 8. Smoke
 9. Cook to 142°F internal temperature
 10. Fully cooked, 155°F internal temperature

- B.
1. Mix dry ingredients in water
 2. Chill shoulder, 38°F
 3. Pump, 10%
 4. Rub 5 lbs of dry ingredients mix on product
 5. Stack
 6. Cure, 38°F, 6 days
 7. Shower
 8. Stockinette
 9. Smoke
 10. Cook to internal temperature of 142°F
 11. Fully cook, 155°F

Cooking Forms

Section 4 of 4

1. Stockinette
2. Hang

SPICED LUNCHEON

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Cow F.C.	68	14	18	21	24	39	20						
Plate	41	40	18	42	16	25		20					
Trim 90 (lean)	71	11	18	28	27	43		30					
Pork													
Butt	57	29	13	27	16	15			100				
Ham, trim	70	9	19	27	17	20				100			
Heart	73	10	15	27	6	32		25					
Jowl, skinned	24	71	5	43	5	2		10					
Trim 80 (lean)	60	23	16	25	16	25	80				100		
Trim 50	36	52	10	34	12	9						100	
Trim Reg	34	58	8	36	10	8		15					
Other Meats or Mixtures or Undesignated													
Salami meat	58	28	12	39	20	31							100
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0		5					
Dextrose	.06	0	0	0	10	0	1		0.7	0.7	0.7		
MSG	0	0	0	0	0	0	0.1			0.1			
Non-fat dry milk	3	1	38	0	25	0		5					
Salt	.01	0	0	0	40	0	2.7	3	3	3	3	3.5	3
Soy protein concentrate	8	0	75	0	45	0		15					
Sugar, (sucrose)	.06	0	0	0	10	0						1	0.5
Moist Ingredients													
Corn syrup	20	0	0	0	5	0	2						
Water or ice	100	0	0	0	0	0	3	25	15	10	15	3	
Calculated composition 5% shrink													
Moisture							58.0	50.9	*58.6	68.7	61.2	32.9	53.7
Fat							19.7	20.4	25.7	8.3	20.4	*50.9	28.5
Protein							16.3	18.9	11.5	17.6	14.2	9.8	12.2
Properties													
% Collagen (Max. 35)							23.8	17.0	27.1	27.0	24.9	34.0	*39.0
Bind Points (Min. 1.8)							3.1	5.5	1.8	3.0	2.3	*1.2	2.4
Color Points (Min. 2)							4.9	3.1	*1.7	3.5	3.5	*0.8	3.8

SPICED LUNCHEON

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4				
Curing Ingredients											
Na or K Nitrite	0.1	0.1	0	0.25	0.25	0.25					
Na or K Nitrate	0.1	0	0	0.5			3				
Na Erythorbate	0.1	0	0		0.87	0.87					
Spices											
Cardamon	8	3.5	9		1						
Celery seed, ground	6	25	18		1						
Cinnamon	10	3	4	2							
Garlic, Powder	6	1	17		0.5						
Ginger	9	4	8.5			0.25					
Mace	8	30	7				1				
Mustard seed, ground	6	24	30				1				
Nutmeg	8	33	7			0.25					
Pepper, white	11	8.5	1.3	8	6	2	4				

Processing Procedures

Section 3 of 4

A.

1. Grind
2. Cure, 38°F, 5 days
3. Chop, add ice
4. Stuff
5. Cook to 155°F internal temperature
6. Dry

B.

1. Grind, 3/16"
2. Chop
3. Mix
4. Stuff
5. Cook to 155°F internal temperature
6. Chill, 40°F
7. Chill to 28°F for slicing

Cooking Form

Section 4 of 4

1. Mold

STEW

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D			
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	100	100					
Trim 85	66	15	18	28	26	41			100				
Other Meats or Mixtures or Undesignated													
Lamb, side, deboned	66	15	18	25	25	25				100			
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	6	6		2.5			
MSG	0	0	0	0	0	0	0.06						
Rice	12	1	7	0	40	0			7				
Rice flour	3	0	5	0	40	0			15				
Salt	.01	0	0	0	40	0	1.7	1.7	2	1.5			
Moist Ingredients													
Oil	0	100	0	0	0	0	6	6		4			
Water or ice	100	0	0	0	0	0	110	110	200	50			
Worcestershire sauce	62	1	6	0	0	90		0.4					
Fruit & Vegetables													
Carrot	88	0	1	0	0	15	18	18	75				
Celery, fresh ground	94	0	1	0	0	0	25						
Onion	89	0	1	0	0	0		3	12.5				
Pea	78	0	6	0	0	0	20			20			
Potato, fresh	80	0	2	0	0	0	60	80	75	90			
Tomato juice	94	0	1	0	0	40			75				
Tomato puree	87	0	2	0	0	70				5			
Turnip	90	0	3	0	0	0				25			
Calculated composition 5% shrink													
Moisture							*81.1	*80.4	*83.8	*76.2			
Fat							5.2	5.5	2.8	6.7			
Protein							6.5	6.6	4.2	7.8			
Properties													
% Collagen (Max. 35)							23.5	24.7	22.5	20.4			
Bind Points (Min. 1.8)							*1.5	*1.6	*1.0	*1.6			
Color Points (Min. 2)							2.4	2.5	*1.5	*1.6			

STEW

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Spices											
Onion powder	5	1	10	11							
Pepper black	11	8.5	12		4						

Processing Procedure

Section 3 of 4

- A.
1. Cube, meat
 2. Brown, in shortening
 3. Simmer, in 1/2 of the water
 4. Cook, vegetables in 1/2 of the water
 5. Mix
 6. Make paste of flour and add
 7. Heat until it thickens
 8. Cool

Cooking Form

Section 4 of 4

1. Pan

STRASSBURGER

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C				
Meat block													
Beef													
Trim 90 (lean)	71	11	18	28	27	43	10	10					
Veal													
Lean	69	10	19	27	26	30			10				
Pork													
Backfat	5	93	1	95	0	0	5						
Jowl, skinned	24	71	5	43	5	2	35	40	40				
Liver	73	7	19	24	2	49	50	50	50				
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	1	1	1				
Mustard, heat treated	6	25	31	0	16	5	1	1	1				
Non-fat dry milk	3	1	38	0	25	0	2	2	2				
Pistachio nut	5	54	19	0	0	0	2	2	2				
Salt	.01	0	0	0	40	0	2.6	2.6	2.6				
Fruit & Vegetables													
Onion	89	0	1	0	0	0			1.5				
Calculated composition 6% shrink													
Moisture							45.0	51.8	46.3				
Fat							*34.7	*33.6	*33.1				
Protein							14.3	14.4	14.4				
Properties													
% Collagen (Max. 35)							24.6	24.8	24.5				
Bind Points (Min. 1.8)							*1.0	*1.0	*1.0				
Color Points (Min. 2)							5.4	5.4	5.1				

STRASSBURGER

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
<u>Curing Ingredients</u>											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Na Erythorbate	0.1	0	0	0.87	0.87						
<u>Spices</u>											
Allspice	8.5	8.7	6	1	1						
Cloves	7	22	6	1	1						
Ginger	9	4	8.5	2	2						
Marjoram	4	7	11	2	2						
Nutmeg	8	33	7	2	2						
Onion powder	5	1	10	3							
Pepper, red	8	17	12	32	32						
Pepper, white	11	8.5	1.3	8	8						

Processing Procedure

Section 3 of 4

A.

1. Chop liver, till it bubbles
2. Add, spice and pork
3. Chop to 50°F
4. Add, milk
5. Chop to 60°F
6. Mix, diced fat, pistachio, red pepper
7. Stuff, loosely
8. Cook in steam to internal temperature of 150°F
9. Chill, ice water, to internal temperature 40°F

Cooking Form

Section 4 of 4

1. Sewed hog bung

SUMMER SAUSAGE

Average Values

Section 1 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Beef													
Cheek meat	70	20	18	59	14	48	25						
Chuck	66	16	18	30	24	38		60	60	10			
Flank	43	42	13	24	12	20					30		
Heart	70	13	17	27	6	40						25	20
Trim 90 (lean)	71	11	18	28	27	43	30					30	20
Trim 75	58	25	16	38	22	34					70		
Trim 70	55	30	15	39	20	31				50			
Tripe, fresh	82	10	9	100	0	0	20						
Pork													
Backfat	5	93	1	95	0	0						20	
Heart	73	10	15	27	6	32				20		25	
Stomach	71	13	15	62	1	0							35
Trim 50	36	52	10	34	12	9	25						
Trim Reg	34	58	8	36	10	8		40	40	20			25
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	1					1	1
MSG	0	0	0	0	0	0		0.25		0.3			
Salt	.01	0	0	0	40	0	3	3	3	3	2.6	3	3
Starter culture	0	0	0	0	0	0			use		use		
Sugar (sucrose)	.06	0	0	0	10	0		0.5	0.5	0.5	1		
Moist Ingredients													
Water or ice	100	0	0	0	0	0					15		
Calculated composition 15% shrink													
Moisture							55.0	42.7	42.8	42.3	50.3	48.1	52.0
Fat							26.4	*37.2	*37.3	*34.2	29.9	*31.3	26.9
Protein							16.1	15.9	15.9	15.8	15.0	15.4	16.1
Properties													
% Collagen (Max. 35)							*47.9	31.3	31.4	34.8	34.4	28.4	*41.5
Bind Points (Min. 1.8)							2.7	3.3	3.3	2.6	3.1	2.2	3.6
Color Points (Min. 2)							5.3	4.9	4.9	4.6	4.6	5.9	3.5

SUMMER SAUSAGE

Average Values

Section 2 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Beef													
Trim 90 (lean)	71	11	18	28	27	43	35	20					
Trim 85	66	15	18	28	26	41			60				
Trim 80	63	20	17	30	24	39				60			
Trim 75	58	25	16	38	22	34					70		
Trim 50	38	50	11	42	12	19						30	30
Pork													
Cheek meat	67	15	17	72	9	29	35						
Trim 80 (lean)	60	23	16	25	16	25	10	60					
Trim 50	36	52	10	34	12	9				40			
Trim Reg	34	58	8	36	10	8	20		40		30		
Trim 15 (fat)	11	85	3	60	3	1		20					
Other Meats or Mixtures or Undesignated													
Elk	71	8	21	20	30	48						70	
Venison	71	8	21	20	30	48							70
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	1		0.75	1			
MSG	0	0	0	0	0	0					0.25		0.3
Non-fat dry milk	3	1	38	0	25	0	4.5				3.5	3.5	3.5
Salt	.01	0	0	0	40	0	2.7	2.7	3	3	2.6	3.1	3.1
Starter culture	0	0	0	0	0	0			use	use			
Sugar (sucrose)	.06	0	0	0	10	0		0.4		0.5	1	1	1
Moist Ingredients													
Water or ice	100	0	0	0	0	0	6				20	15	15
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.06						
Onion	89	0	1	0	0	0					1		1
Calculated composition 15% shrink													
Moisture							51.61	42.1	42.7	41.1	48.2	41.6	55.5
Fat							23.7	*37.7	*36.5	*36.9	*32.0	19.8	19.6
Protein							17.7	15.7	15.9	15.9	13.7	18.5	18.4
Properties													
% Collagen (Max. 35)							*40.9	27.4	29.8	31.3	34.3	22.4	22.3
Bind Points (Min. 1.8)							3.2	2.9	3.5	3.3	3.0	4.9	4.9
Color Points (Min. 2)							5.1	4.5	5.5	4.9	3.7	7.4	7.3

SUMMER SAUSAGE

Average Values

Section 3 of 8

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							O	P					
Meat block													
Pork													
Trim Reg	34	58	8	36	10	8	20	20					
Other Meats or Mixtures or Undesignated													
Elk	71	8	21	20	30	48	80						
Venison	71	8	21	20	30	48		80					
Dry Ingredients													
Salt	.01	0	0	0	40	0	3.25	3.25					
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.5					
Calculated composition 15% shrink													
Moisture							55.5	54.5					
Fat							20.4	20.4					
Protein							20.9	20.9					
Properties													
% Collagen (Max. 35)							21.9	21.4					
Bind Points (Min. 1.8)							5.9	5.9					
Color Points (Min. 2)							9.3	9.3					

SUMMER SAUSAGE

Average Values

Section 4 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Na or K Nitrate	0.1	0	0	2	0.5	0.5	0.5				
Spices											
Allspice	8.5	8.7	6					0.5	0.5		
Coriander	5	18	15		0.75			2	2	1	1
Garlic, Powder	6	1	17					1		0.5	
Ginger	9	4	8.5							1	1
Mustard seed, ground	6	24	30			6	2	1	1	1	1
Nutmeg	8	33	7					0.5	0.5		
Pepper black	11	8.5	12		5		4.5	6	6		
Pepper, white	11	8.5	13	6							
Vinegar, 90 gr.	94	0	0				5		5		3

SUMMER SAUSAGE

Average Values

Section 5 of 8

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14		
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.2	0.2	0.2	0.15	0.15	0.12		
Na or K Nitrate	0.1	0	0				2.5	2.5			
Na Erythorbate	0.1	0	0	0.87	0.87	0.87	0.87	0.87	0.87		
Spices											
Allspice	8.5	8.7	6						0.75		
Coriander	5	18	15				1	0.5	2		
Garlic Powder	6	1	17				0.2				
Ginger	9	4	8.5				1	0.5			
Liquid smoke	80	0	0	5	5	5					
Mustard seed, ground	6	24	30	12	5	1	1	1	3		
Nutmeg	8	33	7		2		1	1			
Pepper black	11	8.5	12		5		5	0.5	4		
Pepper, white	11	8.5	1.3	6		5					

Processing Procedures

Section 6 of 8

A.

1. Grind, 1/8"
2. Mix, add starter culture
3. Stuff
4. Ferment, 100°F, 90% RH, to pH 4.8
5. Smoke, 150°F
6. Cook to internal temperature of 140°F
7. Cool, room temperature
8. Chill, 36°F

B.

1. Grind
2. Cure, 38°F, 72 hours
3. Cold, heavy smoke, 8 hours
4. Cook to internal temperature of 150°F

C.

1. Chill, meat, 38°F
2. Grind, 3/16"
3. Mix
4. Cure, 38°F, 2 days
5. Stuff
6. Dry, 5 hours, 70°F

SUMMER SAUSAGE

Section 7 of 8

Processing Procedures

C. (cont)

7. Cook to internal temperature of 145°F
8. Shower to 120°F
9. Cool, Room temperature, 2 hours
10. Chill, 38°F, 18 hours

D.

1. Grind
2. Ferment, 38°F, 72 hours and use starter culture
3. Cool (110°F) heavy smoke
4. Cook slowly to internal temperature of 150°F

E.

1. Grind
2. Mix
3. Stuff
4. Hang, 40°F, 18 hours
5. Slow smoke
6. Cook to internal temperature of 150°F

F.

1. Grind, 1/4"
2. Mix
3. Cure, 18 hours, 38°F
4. Grind, 1/8"
5. Stuff
6. Smoke
7. Cook to internal temperature of 138°F
8. Water cool to internal temperature of 90°F
9. Chill, 38°F

G.

1. Chill, meat to 32°F
2. Grind, fat product, 1"
3. Grind, lean product, 3/16"
4. Mix
5. Cure, 36°F, 2 days
6. Regrind, 1/8", mix
7. Stuff
8. Green room, 45°F, 24 hrs
9. Smoke
10. Cook to internal temperature of 152°F
11. Cold shower to 110°F internal temperature
12. Dry
13. Chill, 45°F

Cooking Forms

Section 8 of 8

1. Use 2 1/2-3" beef middles
2. Fibrous casing
3. A 2-1/2-3" cellulose casing

SWEET, SOUR LOAF (Heidelberg)

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
Meat block							A							
Pork														
Cheek meat	67	15	17	72	9	29	40							
Heart	73	10	15	27	6	32	16							
Lips	71	14	15	90	1	1	24							
Snout	45	40	14	80	2	1	20							
Dry Ingredients														
Gelatin	13	0	85	0	20	0	3.2							
Salt	.01	0	0	0	40	0	3							
Sugar (sucrose)	.06	0	0	0	10	0	5.5							
Moist Ingredients														
Water or ice	100	0	0	0	0	0	8							
Fruit & Vegetables														
Pepper, green	93	0	1	0	0	0	0.25							
Pimiento	92	1	1	0	0	0	1							
Calculated composition 7% shrink														
Moisture							58.3							
Fat							16.9							
Protein							16.3							
Properties														
% Collagen (Max. 35)							60.1							
Bind Points (Min. 1.8)							*1.2							
Color Points (Min. 2)							2.5							

SWEET, SOUR LOAF (Heidelberg)

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Cloves	7	22	6	2							
Vinegar	94	0	0	11.5							

Processing Procedure

Section 3 of 4

A.

1. Cook, meat in nets
2. Cut, in strips
3. Grind, hearts
4. Boil, gelatin
5. Add, cooked meat
6. Add, vegetables
7. Retain
8. Chill

Cooking Form

Section 4 of 4

1. Pan

TAMALES

Average Values

Section 1 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C				
Meat block													
Beef													
Fat	5	94	1	95	0	0	25						
Trim 70	55	30	15	39	20	31	38						
Trim 65	50	35	14	39	18	28		50	50				
Pork													
Trim 50	36	52	10	34	12	9	37						
Trim Reg	34	58	8	36	10	8		50	50				
Dry Ingredients													
Cereal flour	12	1	10	0	18	0	10	8					
Dextrose	.06	0	0	0	10	0	0.5						
Non-fat dry milk	3	1	38	0	25	0			8				
Salt	.01	0	0	0	40	0	2.5	2.2	2.2				
Moist Ingredients													
Water or ice	100	0	0	0	0	0		12	12				
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.25						
Onion	89	0	1	0	0	0	6						
Tomato puree	87	0	2	0	0	70	8	16	16				
Calculated composition 15% shrink													
Moisture							29.0	40.98	40.4				
Fat							*50.1	*39.7	*39.7				
Protein							10.1	10.3	12.2				
Properties													
% Collagen (Max. 35)							34.0	34.5	29.1				
Bind Points (Min. 1.8)							*1.6	*1.5	2.1				
Color Points (Min. 2)							2.0	2.1	2.1				

TAMALES

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Spices											
Celery seed, ground	6	25	18	2							
Chili pepper	8	17	12	40	40						
Coriander	5	18	15	5							
Cumin seed	8	22	18	6	6						
Oregano	7	10	11	3	2						
Paprika	10	13	15	16	4						
Pepper black	11	8.5	12		2						
Pepper, red	8	17	12		1						

Processing Procedures

Section 3 of 5

A.

1. Meal mixture

50 pounds corn meal
22 gallons water
7 pounds pork fat
3 pounds salt

2. Bring water to a boil
3. Add, meal mix
4. Add, fat
5. Cook, 1 hour

B.

1. Meal mixture

50 pounds corn meal
28 gallons water
5 pounds red fat from chili broth
3 pounds salt

2. Bring water to a boil
3. Add, meal mix
4. Add, fat
5. Cook, 1 hr

TAMALES

Section 4 of 5

Processing Procedures

C.

1. Meal mixture

43 pounds corn meal
7 pounds flour
5 pounds red fat from chili broth
28 gallon water
3 pounds salt

2. Bring water to a boil
3. Add, meal mix
4. Add, fat
5. Cook, 1 hour

D.

1. Meal mixture

40 pounds corn meal
8 pounds NFDm
5 pounds red fat from chili broth
30 gallon water
2.5 pounds salt

2. Bring water to a boil
3. Add, meal
4. Add, fat
5. Cook, 1 hour

E.

1. Melt fat with onion and garlic
2. Grind, meat
3. Cook
4. Mix
5. Cook with water

F.

1. Assembly

parchment paper
layer of mush
layer of meat
roll up and tie ends
steam for 2 hours

Cooking Form

Section 5 of 5

1. Form

TEEWURST

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C				
Beef													
Cow F.C.	68	14	18	21	24	39	60	20					
Pork													
Backfat	5	93	1	95	0	0	40	30	40				
Trim 80 (lean)	60	23	16	25	16	25		50	60				
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0	1	1	1				
Salt	.01	0	0	0	40	0	2.5	2.5	2.5				
Moist Ingredients													
Rum	57	0	0	0	0	0	0.4	0.4	0.4				
Calculated composition 10% shrink													
Moisture							34.9	37.4	29.8				
Fat							*48.8	*45.1	*54.5				
Protein							11.9	12.7	10.7				
Properties													
% Collagen (Max. 35)							23.8	25.6	27.8				
Bind Points (Min. 1.8)							2.8	2.3	*1.6				
Color Points (Min. 2)							4.5	3.6	2.6				

TEEWURST

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.1						
Na or K Nitrate	0.1	0	0	1	2.5						
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Allspice	8.5	8.7	6	0.8	0.8						
Cardamon	8	3.5	9	0.4	0.4						
Paprika	10	13	15	1	1						
Pepper, white	11	8.5	1.3	3.6	3.6						

Processing Procedures

Section 3 of 4

A.

1. Bone and defat meat
2. Chill, 32°F
3. Grind, pork, 1/2"
4. Grind, beef, 1/8"
5. Mix
6. Cure, 34°F, 24 hours
7. Regrind, 1/8"
8. Stuff
9. Shower
10. Green room, 70°F, 75% RH, 3 days
11. Smoke, 70°F, 48 Hours
12. Chill

B.

1. Bone and defat meat
2. Chill, 32°F
3. Grind, pork, 1/2"
4. Grind, beef, 1/8"
5. Mix
6. Cure, 34°F, 24 hours
7. Regrind, 1/8"
8. Stuff
9. Smoke, 8 hours
10. Chill

Cooking Forms

Section 4 of 4

1. Beef rounds
2. Wide hog casings

THURINGER

Average Values

Section 1 of 12

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Beef													
Bull F.C.	70	10	20	20	30	47	30						
Cheek meat	70	20	18	59	14	48		20					
Chuck	66	16	18	30	24	38	30		60	60	60	60	45
Cow F.C.	68	14	18	21	24	39		40					
Heart	70	13	17	27	6	40		20					
Navels	40	50	10	42	14	21							55
Plate	41	40	18	42	16	25			20				
Pork													
Backfat	5	93	1	95	0	0		20					
Trim 80 (lean)	60	23	16	25	16	25				20			
Trim Reg	34	58	8	36	10	8	40		20	20	40	40	
Dry Ingredients													
Dextrose	.06	0	0	0	10	0	1.5	0.75	0.7	0.2	1		0.4
MSG	0	0	0	0	0	0		0.25			0.25		
Non-fat dry milk	3	1	38	0	25	0					4		
Salt	.01	0	0	0	40	0	3.5	3	2.5	3	3	3	2
Starter culture	0	0	0	0	0	0	use	use					
Sugar (sucrose)	.06	0	0	0	10	0				0.2	0.5	1.5	
Moist Ingredients													
Water or ice	100	0	0	0	0	0		5				6	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0	0.03						0.06
Calculated composition 15% shrink													
Moisture							43.3	48.4	44.6	48.8	40.0	45.4	41.7
Fat							*34.7	*33.2	*33.3	29.4	*35.5	*34.9	*39.8
Protein							16.4	15.5	18.2	17.7	16.8	14.9	15.6
Properties													
% Collagen (Max. 35)							27.1	32.9	33.1	29.7	28.3	31.4	34.9
Bind Points (Min. 1.8)							3.8	2.6	3.8	3.7	3.6	3.1	3.1
Color Points (Min. 2)							5.7	6.4	5.9	5.7	4.7	4.6	4.9

THURINGER

Average Values

Section 2 of 12

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							H	I	J	K	L	M	N
Beef													
Chuck	66	16	18	30	24	38	35						
Cow F.C.	68	14	18	21	24	39		80	70				
Flank	43	42	13	24	12	20			30	30			
Heart	70	13	17	27	6	40					15		
Trim 90 (lean)	71	11	18	28	27	43						30	25
Trim 80	63	20	17	30	24	39					75		
Trim 75	58	25	16	38	22	34				70			
Pork													
Backfat	5	93	1	95	0	0		20			10		
Shoulder	58	27	14	25	18	15	35						
Trim 80 (lean)	60	23	16	25	16	25	30					50	60
Trim Reg	34	58	8	36	10	8						20	15
Dry Ingredients													
Corn syrup solids	3.5	0	0	0	5	0						1	1
Dextrose	.06	0	0	0	10	0	0.4	0.75	0.75		1.5		
Salt	.01	0	0	0	40	0	3.5	3	3	2.6	3.5	2.6	2.6
Starter culture	0	0	0	0	0	0		use	use		use		
Sugar (sucrose)	.06	0	0	0	10	0	0.4			1			
Moist Ingredients													
Water or ice	100	0	0	0	0	0		5	5	15		5	5
Calculated composition 15% shrink													
Moisture							56.1	47.7	53.2	50.3	47.6	50.7	51.6
Fat							24.8	*32.2	24.2	29.9	29.4	28.6	27.4
Protein							18.0	15.8	17.8	14.9	17.3	16.2	16.6
Properties													
% Collagen (Max. 35)							27.0	22.0	21.8	34.6	29.8	27.3	26.7
Bind Points (Min. 1.8)							3.6	3.7	3.8	2.9	3.6	3.1	3.1
Color Points (Min. 2)							4.9	6.1	6.2	4.6	6.7	4.8	4.8

THURINGER

Average Values

Section 3 of 12

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							O	P	Q	R	S	T	U
Beef													
Trim 90 (lean)	71	11	18	28	27	43	20						
Trim 80	63	20	17	30	24	39		75					
Trim 75	58	25	16	38	22	34			60				
Trim 65	50	35	14	39	18	28				60			
Trim 50	38	50	11	42	12	19					40	40	
Trim 40	27	65	7	36	8	14							30
Pork													
Backfat	5	93	1	95	0	0		10					
Cheek meat	67	15	17	72	9	29			15				
Heart	73	10	15	27	6	32		15					
Trim 80 (lean)	60	23	16	25	16	25	40			40			
Trim Reg	34	58	8	36	10	8	40		25				
Other Meats or Mixtures or Undesignated													
Elk	71	8	21	20	30	48					60		70
Venison	71	8	21	20	30	48						60	
Dry Ingredients													
Com symp solids	3.5	0	0	0	5	0	1						
Dextrose	.06	0	0	0	10	0		1		1			
Salt	.01	0	0	0	40	0	2.6	2	2.5	2	2.6	2.6	3
Starter culture	0	0	0	0	0	0		use		use			
Sugar (sucrose)	.06	0	0	0	10	0		0.5	0.5	0.5	1	1	
Moist Ingredients													
Water or ice	100	0	0	0	0	0	5				15	15	
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0				0.15			
Calculated composition 15% shrink													
Moisture							43.9	49.1	43.3	43.8	54.6	54.6	48.4
Fat							*37.5	29.3	*36.3	*34.3	24.6	24.6	28.7
Protein							14.3	17.2	16.2	16.8	16.9	16.9	19.2
Properties													
% Collagen (Max. 35)							28.5	30.0	*43.7	32.9	25.7	25.6	22.0
Bind Points (Min. 1.8)							2.5	3.6	2.9	2.9	4.3	4.3	5.2
Color Points (Min. 2)							3.7	6.5	4.8	4.5	6.8	6.8	8.4

THURINGER

Average Values

Section 4 of 12

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							V	W	X	Y			
Beef													
Trim 40	27	65	7	36	8	14	30						
Tripe, fresh	82	10	9	100	0	0		20					
Pork													
Backfat	5	93	1	95	0	0		30	20				
Check meat	67	15	17	72	9	29			20	20			
Heart	73	10	15	27	6	32			20				
Trim 80 (lean)	60	23	16	25	16	25		50	40	80			
Other Meats or Mixtures or Undesignated													
Venison	71	8	21	20	30	48	70						
Dry Ingredients													
Dextrose	.06	0	0	0	10	0			1	1			
Salt	.01	0	0	0	40	0	3	1.75	2.75	2.75			
Fruit & Vegetables													
Garlic, fresh	61	0	6	0	0	0				0.03			
Calculated composition 15% shrink													
Moisture							48.4	37.7	42.5	51.9			
Fat							28.7	*47.9	*37.2	24.3			
Protein							19.2	11.7	14.7	18.3			
Properties													
% Collagen (Max. 35)							22.0	*40.4	*38.9	34.9			
Bind Points (Min. 1.8)							5.2	*1.5	*1.7	2.7			
Color Points (Min. 2)							8.4	2.3	4.0	4.7			

THURINGER

Average Values

Section 5 of 12

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25	0.25	0.25	0.2	0.2	0.12
Na or K Nitrate	0.1	0	0	2.5	2	1					2
Na Erythorbate	0.1	0	0			0.87			0.87	0.87	
Spices											
Allspice	8.5	8.7	6								1
Caraway seeds	10	15	20			0.8					
Celery seed	6	25	18						1		
Coriander	5	18	15			0.4			1	2	2
Ginger	9	4	8.5				1	1			
Liquid smoke	80	0	0						4	3	
Mace	8	30	7						1		
Marjoram	4	7	11			0.4					
Mustard seed	6	24	30	2							
Mustard seed, ground	6	24	30	3	2				4	3	2
Nutmeg	8	33	7						1	2	1
Paprika	10	13	15						4	3	
Pepper black	11	8.5	12		4.5		4	4			4
Pepper, black, cracked	9	9	11				5				
Pepper, red	8	17	12								3
Pepper, white	11	8.5	1.3	6		4			5	5	
Vinegar, 90 gr.	94	0	0	6.4							

THURINGER

Average Values

Section 6 of 12

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				9	10	11	12	13	14	15	16
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.12	0.12	0.12	0.12				
Na or K Nitrate	0.1	0	0	0.25	0.25			3	3		
Na Erythorbate	0.1	0	0	0.87	0.87						
Spices											
Caraway	10	15	20					2	2	2	0.75
Celery seed	6	25	18								0.75
Coriander	5	18	15					2	2		1
Ginger	9	4	8.5	1							1
Mace	8	30	7								1
Maple flavor	35	0	0			2					
Mustard seed, ground	6	24	30		0.5	1					
Nutmeg	8	33	7		0.5			3	3	2	
Paprika	10	13	15					1	1		
Pepper black	11	8.5	12	5	6		8	1			6
Pepper, black, cracked	9	9	11	1	1						
Pepper, white	11	8.5	1.3			6		5	5	6	
Pepper, white, whole	11	8	10			3					
Vinegar 90 gr.	94	0	0								8

THURINGER

Average Values

Section 7 of 12

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				17							
Spices											
Cloves	7	22	6	0.5							
Coriander	5	18	15	2							
Maple flavor	35	0	0	1							
Pepper white	11	8.5	1.3	8							

Processing Procedures

Section 8 of 12

A.

1. Grind, 1/2", 1/8"
2. Mix
3. Stuff
4. Cure, 38°F, 48 hours
5. Room temperature, 2 hours
6. Cook to internal temperature of 150°F
7. Shower to internal temperature of 100°F
8. Spray hot water
9. Room temperature to dry
10. Chill, 36°F, 24 hours

B.

1. Grind, 1/2", 1/8"
2. Mix
3. Stuff
4. Cure, 38°F, 48 Hours
5. Room temperature, 2 hours
6. Water cook to internal temperature of 150°F
7. Shower to internal temperature of 100°F
8. Spray hot water
9. Room temperature to dry
10. Chill, 36°F, 24 hours

Processing Procedures

C.

1. Grind
2. Mix
3. Stuff
4. Cold smoke

D.

1. Grind
2. Mix
3. Cure, 38°F
4. Mix
5. Stuff
6. Hold, 72 hours, 38°F
7. Hold, 4 hours, room temperature
8. Smoke, 100°F, 48 hours
9. Cook to internal temperature of 140°F

E.

1. Grind
2. Mix
3. Cure, 38°F
4. Mix
5. Hold, 72 hours, 38°F
6. Hold, 4 hours, room temperature
7. Smoke, 90°F, 48 hours
8. Smoke, 110°F, 24 hours
9. Cook to internal temperature of 140°F

F.

1. Grind, 3/16"
2. Mix
3. Cure, 4 days, 38°F
4. Grind, 1/8"
5. Stuff tight
6. Hold, 70°F, 12 hours
7. Hold, 65°F, 24 hours
8. Heavy smoke, 100°F, 8 hours
9. Cook to internal temperature of 138°F
10. Cool, room temperature
11. Chill, 18 hours, 38°F

G.

1. Grind
2. Mix
3. Grind
4. Stuff
5. Water cook to internal temperature of 148°F

Processing Procedures

H.

1. Grind
2. Mix
3. Add starter culture
4. Stuff
5. Hold, 80°F, 80% RH, 12 hours
6. Hold, 100°F, 85% RH, 24 hours
7. Cook, to internal temperature of 137°F
8. Room temperature, to cool
9. Hold, 40°F, 3 days
10. pH 4.5

I.

1. Grind
2. Chop
3. Mix
4. Stuff
5. Cool
6. Sell fresh

J.

1. Grind
2. Mix
3. Cure, 24 hours
4. Stuff
5. Hold, room temperature, 1 hour
6. Smoke, 110°F
7. Dry
8. Dip, 1 minute, 180°F water
9. Cool
10. Store

K.

1. Grind, 1/4"
2. Mix
3. Cure, 38°F, 4 days
4. Regrind, 1/8"
5. Stuff
6. Hold, 70°F, 12 hours
7. Heavy smoke, 110°F, 10 hours
8. Cook to internal temperature of 138°F
9. Chill, 40°F, 24 hours

L.

1. Grind, 1/4"
2. Mix
3. Cure, 18 hours, 38°F
4. Regrind, 1/8"

Processing Procedures

L. (cont)

5. Mix
6. Stuff
7. Smoke, 160°F, 18 hours
8. Cook to internal temperature of 140°F
9. Water cool to internal temperature of 90°F
10. Chill, 34°F

M.

1. Chill, meat, 32°F
2. Dice, backfat, freeze
3. Mix, with starter culture
4. Grind, 1/8"
5. Stuff
6. Cure, 80°F, 80% RH, 16 hours
7. Smoke, 20 hours, 110°F
8. Cook to internal temperature of 137°F
9. Chill, 45°F, 24 hours

N.

1. Grind
2. Chop, 1/4"
3. Stuff
4. Cure, 38°F, 18 hours
5. Dry, 70°F, 2 hours
6. Smoke
7. Cook to internal temperature of 152°F
8. Shower to internal temperature of 90°F
9. Chill, 38°F

O.

1. Grind
2. Chop, 1/4"
3. Stuff
4. Cure, 36°F, 16 hours
5. Dry, 72°F, 1.5 hours
6. Smoke
7. Water cook to internal temperature of 154°F
8. Shower to internal temperature of 95°F
9. Chill, 36°F

Cooking Form

Section 12 of 12

1. A 2-1/2" casing
2. Beef middles
3. A 2-3/4-3" sewed single wall beef middle
4. Fibrous casing
5. Sewed, defatted hog bungs
6. A 30-32 mm hog casing

TOMATO SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C				
Beef													
Trim 70	55	30	15	39	20	31	50						
Veal													
Lean	69	10	19	27	26	30		24					
Pork													
Fat, caul	5	93	1	95	0	0		17					
Trim 80 (lean)	60	23	16	25	16	25	40	59					
Trim 50	36	52	10	34	12	9	10						
Trim Reg	34	58	8	36	10	8			100				
Dry Ingredients													
Cracker meal	4	13	9	0	15	0	14	6					
Dextrose	.06	0	0	0	10	0		0.5					
Non-fat dry milk	3	1	38	0	25	0			3.5				
Salt	.01	0	0	0	40	0	2.5	2.5	3				
Moist Ingredients													
Water or ice	100	0	0	0	0	0	use	25					
Fruit & Vegetables													
Onion	89	0	1	0	0	0			0.15				
Tomato	92	0	1	0	0	60	22	15	18				
Calculated composition 3% shrink													
Moisture							53.4	*60.5	38.9				
Fat							23.2	22.5	*48.0				
Protein							12.2	10.3	7.9				
Properties													
% Collagen (Max. 35)							29.7	25.3	30.3				
Bind Points (Min. 1.8)							2.1	1.9	*0.9				
Color Points (Min. 2)							3.1	2.6	*0.6				

A) Water or ice is not used in calculation of A

TOMATO SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3					
Spices											
Ginger	9	4	8.5	2.5							
Nutmeg	8	33	7	2.5							
Pepper black	11	8.5	12		2						
Pepper, white	11	8.5	1.3	7		8					
Sage	3	14	8.5			2.3					

Processing Procedures

Section 3 of 4

A.

1. Grind
2. Store, 36°F, 18 hours
3. Chop and mix
4. Stuff
5. Dry at 42°F
6. Store at 32°F
7. Sell, fresh

B.

1. Soak crackers in water
2. Chop
3. Stuff
4. Cook

C.

1. Grind, 3/8"
2. Mix
3. Grind, 1/8"
4. Stuff
5. Very perishable

Cooking Forms

Section 4 of 4

1. Bulk carton
2. A 1" cellulose bag

TONGUE AND CHEESE LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Pork													
Tongue	63	19	17	66	8	36	100						
Dry Ingredients													
Cheese, cheddar	37	32	25	0	0	1	10						
Gelatin	13	0	85	0	20	0	use						
Salt	.01	0	0	0	40	0	3						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	use						
Calculated composition 2% shrink													
Moisture							58.2						
Fat							20.0						
Protein							17.6						
Properties													
% Collagen (Max. 35)							*57.5						
Bind Points (Min. 1.8)							*1.2						
Color Points (Min. 2)							5.6						

A) Gelatin and Water or ice, are not used in the calculation of A

TONGUE AND CHEESE LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Spices											
Celery seed, ground	6	25	18	2							
Pepper black	11	8.5	12	6							

Processing Procedure

Section 3 of 4

A.

1. Cure tongues
2. Mix with heavy gelatin

Cooking Forms

Section 4 of 4

1. Pan
2. Mold

TONGUE CURED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations							
Meat block							A	B	C	D				
Beef														
Tongue	66	16	18	60	7	61	100	100	100	100				
Dry Ingredients														
Salt	.01	0	0	0	40	0	10	10	8.3	6.7				
Sugar (sucrose)	.06	0	0	0	10	0	1		2.5	2				
Moist Ingredients														
Water or ice	100	0	0	0	0	0	85	83	83	85				
% Pump							10	10	10	10				
Calculated composition 10% shrink														
Moisture							*74.5	*74.7	*74.3	*75.5				
Fat							9.1	9.2	9.2	9.2				
Protein							10.2	10.4	10.3	10.3				
Properties														
% Collagen (Max. 35)							*60.0	*60.0	*60.0	*60.0				
Bind Points (Min. 1.8)							*0.7	*0.7	*0.7	*0.7				
Color Points (Min. 2)							6.2	6.3	6.3	6.3				

TONGUE CURED

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4				
Curing Ingredients											
Na or K Nitrite	0.1	0	0	2.5	2.4	1	1				
Na or K Nitrate	0.1	0	0		2.4	2					
Na Erythorbate	0.1	0	0		0.8	3	3				

TONGUE, CURED

Section 3 of 4

Processing Procedures

- A.
 - 1. Pump, 15%
 - 2. Cure, 7 days, 36°F
 - 3. Smoke, slow
 - 4. Chill, 36°F
- B.
 - 1. Cover pickle
 - 2. Cure, 5 days, 38°F
 - 3. Overhaul, change position
 - 4. Cure, 3 days, 38°F
 - 5. Wash
 - 6. Stockinette
 - 7. Room temperature, 5 hours
 - 8. Smoke
 - 9. Cook, 150°F
 - 10. Room temperature to 110°F
 - 11. Chill, 38°F
- C.
 - 1. Pump, 5%
 - 2. Cover pickle, 3 day, 38°F
 - 3. Wash
 - 4. Stockinette
 - 5. Dry, 5 hours, 70°F
 - 6. Smoke
 - 7. Cook
 - 8. Cool, 70°F to internal temperature of 110°F
 - 9. Chill, 36°F
- D.
 - 1. Clean with 100° brine and brush
 - 2. Pump, 10%
 - 3. Cure, 18 hours, 34°F
 - 4. Boil
 - 5. Fill jar
 - 6. Add gelatin (5%)
 - 7. Vacuum close
 - 8. Retort

Cooking Forms

Section 4 of 4

- 1. Jar
- 2. Stockinette

TONGUE, HEAD CHEESE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Pork												
Ears	68	17	13	99	1	1	10					
Skin	40	32	28	99	6	1	10					
Snout	45	40	14	80	2	1	20					
Tongue	63	19	17	66	8	36	60					
Dry Ingredients												
Gelatin	13	0	85	0	20	0	3					
Salt	.01	0	0	0	40	0	4					
Calculated composition 5% shrink												
Moisture							51.8					
Fat							23.9					
Protein							19.3					
Properties												
% Collagen (Max. 35)							*66.3					
Bind Points (Min. 1.8)							*1.5					
Color Points (Min. 2)							3.7					

TONGUE, HEAD CHEESE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Spices											
Caraway seeds	10	15	20	2							
Cloves	7	22	6	0.5							
Marjoram	4	7	11	0.5							
Pepper, white	11	8.5	1.3	4							

Processing Procedure

Section 3 of 4

A.

1. Cure, meat
2. Cook, meat in nets, 170°F
3. Bone
4. Rinse in hot water
5. Grind
6. Mix
7. Add gelatin
8. Stuff
9. Cook, 60 minutes at 155°F
10. Cool

Cooking Forms

Section 4 of 4

1. Mold
2. Pan

TONGUE, PORK, JELLIED

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Pork													
Tongue, cured	65	17	16	58	8	45	100						
Dry Ingredients													
Gelatin	13	0	85	0	20	0	4						
MSG	0	0	0	0	0	0	0.25						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20						
Calculated composition 15% shrink													
Moisture							63.3						
Fat							16.1						
Protein							18.4						
Properties													
% Collagen (Max. 35)							*47.8						
Bind Points (Min. 1.8)							1.9						
Color Points (Min. 2)							6.8						

TONGUE, PORK, JELLIED

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	use	use						
Spices											
Allspice	8.5	8.7	6	4							
Cloves	7	22	6	1							
Onion powder	5	1	10	4							
Pepper, white	11	8.5	1.3	4							

Processing Procedures

Section 3 of 4

A.

1. Tongue cure

42 pounds water
3.5 pounds salt
0.3 ounces nitrite
0.25 ounces Na erythorbate

2. Cure, tongues for 1 week

B.

1. Cure, pork tongues
2. Soak at 120°F
3. Scrape off skin
4. Cook, 3 hours, 165°F
5. Remove gullet bone
6. Pack in retainer or molds
7. Pour gelatin water over meat
8. Put on lid
9. Press
10. Cool
11. Remove and wrap

Cooking Forms

Section 4 of 4

1. Retainer
2. Molds
3. Loaf pans

TONGUE SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C				
Beef													
Tongue	66	16	18	60	7	61	50						
Trim 70	55	30	15	39	20	31	50	50					
Trim 65	50	35	14	39	18	28			25				
Pork													
Tongue	63	19	17	66	8	36		50	50				
Trim 80 (lean)	60	23	16	25	16	25			25				
Dry Ingredients													
Salt	.01	0	0	0	40	0	3	3	3				
Fruit & Vegetables													
Onion	89	0	1	0	0	0	0.25	0.2	0.3				
Calculated composition 5% shrink													
Moisture							56.6	55.1	55.1				
Fat							23.4	24.9	24.5				
Protein							16.8	16.3	16.3				
Properties													
% Collagen (Max. 35)							*50.5	*53.4	*49.9				
Bind Points (Min. 1.8)							2.2	2.2	1.9				
Color Points (Min. 2)							7.9	5.5	5.1				

TONGUE SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Spices											
Mustard seed, ground	6	24	30	1							
Pepper black	11	8.5	12	4							
Pepper, white	11	8.5	1.3	2							

Processing Procedure

Section 3 of 4

A.

1. Cut, tongue into cubes, 1"
2. Grind, meat
3. Mix
4. Stuff, in large casings
5. Boil, 1 hour

Cooking Forms

Section 4 of 4

1. Large casing

VEAL, JELLIED

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Beef													
Veal													
Lean	69	10	19	27	26	30	100						
Dry Ingredients													
Gelatin	13	0	85	0	20	0	use						
Salt	.01	0	0	0	40	0	2						
Moist Ingredients													
Water or ice	100	0	0	0	0	0	use						

VEAL, JELLIED

Section 2 of 3

1. Cook, veal with salt
2. Cut, into strips
3. Place, in casing
4. Pour, in gelatin water
5. Chill

Cooking Forms

Section 3 of 3

1. Pan
2. Casing

VEAL LOAF

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							A	B	C	D	E	
Meat block												
Beef												
Tripe, fresh	82	10	9	100	0	0	35					
Veal												
Lean	69	10	19	27	26	30	50	80	80	60	50	
Pork												
Backfat	5	93	1	95	0	0		20	20			
Trim 80 (lean)	60	23	16	25	16	25					50	
Trim Reg	34	58	8	36	10	8	15			40		
Dry Ingredients												
Bread crumb	7	5	13	0	15	0		17				
Cereal flour	12	1	10	0	18	0	7			10	10	
Cracker meal	4	13	9	0	15	0			6			
Dextrose	.06	0	0	0	10	0				1		
MSG	0	0	0	0	0	0	0.12					
Non-fat dry milk	3	1	38	0	25	0			5	5		
Salt	.01	0	0	0	40	0	2.5	2.5	2	3	2	
Moist Ingredients												
Butter	15	81	1	0	0	1			1.3			
Egg	74	12	13	0	0	1	2.5		3			
Water or ice	100	0	0	0	0	0		16		50		
Fruit & Vegetables												
Lemon peel and juice	87	0	1	0	0	0			0.75			
Pimiento, canned	92	1	1	0	0	60				4		
Calculated composition 6% shrink												
Moisture							61.0	51.2	47.4	*61.3	56.0	
Fat							16.7	21.6	25.9	18.1	15.8	
Protein							14.1	13.8	16.4	10.8	17.6	
Properties												
% Collagen (Max. 35)							*41.3	24.4	23.6	24.1	24.7	
Bind Points (Min. 1.8)							2.6	3.4	4.1	2.4	3.7	
Color Points (Min. 2)							2.8	3.6	4.1	2.3	4.6	

VEAL LOAF

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6		
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25							
Na or K Nitrate	0.1	0	0	1							
Na Erythorbate	0.1	0	0	0.87							
Spices											
Cardamon	8	3.5	9		2						
Garlic Powder	6	1	17			0.2					
Mace	8	30	7				4				
Nutmeg	8	33	7	0.5				0.5			
Onion powder	5	1	10	3	2	2		3.5	3.5		
Pepper black	11	8.5	12		5	4					
Pepper, white	11	8.5	1.3	4			5	5	5		
Sage	3	14	8.5	0.5		1	0.5		1		
Thyme	8	7	9	0.1		0.5					

VEAL LOAF

Section 3 of 4

Processing Procedures

- A.
 - 1. Grind
 - 2. Mix
 - 3. Mold
 - 4. Bake, 2 hours, 225°F
 - 5. Cool
- B.
 - 1. Grind
 - 2. Mix
 - 3. Mold
 - 4. Water cook
 - 5. Brown
 - 6. Cool
- C.
 - 1. Grind meat, 1/16"
 - 2. Mix
 - 3. Pack in cans
 - 4. Vacuum seal
 - 5. Retort
 - 6. Cool
- D.
 - 1. Browning
dip in oil or lard, 350°F

Cooking Forms

Section 4 of 4

- 1. Pans
- 2. Cans

VEAL SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B					
Beef													
Chuck	66	16	18	30	24	38	20						
Trim 70	55	30	15	39	20	31		20					
Veal													
Lean	69	10	19	27	26	30	51	50					
Pork													
Trim Reg	34	58	8	36	10	8	29	30					
Dry Ingredients													
Salt	.01	0	0	0	40	0	3	2.5					
Sugar (sucrose)	.06	0	0	0	10	0	0.5	0.25					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20						
Calculated composition 5% shrink													
Moisture							57.3	51.8					
Fat							21.4	29.1					
Protein							13.3	15.3					
Properties													
% Collagen (Max. 35)							29.0	30.8					
Bind Points (Min. 1.8)							3.1	3.4					
Color Points (Min. 2)							3.8	4.1					

VEAL SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.12						
Na or K Nitrate	0.1	0	0	0.5	3						
Spices											
Cardamom	8	3.5	9	0.5	0.5						
Nutmeg	8	33	7	1	1						
Paprika	10	13	15	1	1						
Pepper, white	11	8.5	1.3	4.5	4.5						

Processing Procedures

Section 3 of 4

A.

1. Grind
2. Mix
3. Stuff
4. Dry, room temperature, 45 minutes
5. Smoke
6. Cook to internal temperature of 152°F
7. Chill, 38°F, 24 hours

B.

1. Grind
2. Mix
3. Dry, room temperature, 45 minutes
4. Smoke
5. Steam cook to internal temperature of 152°F
6. Chill, 24 hours, 38°F

Cooking Forms

Section 4 of 4

1. Form
2. Collagen casing

VEGETABLE LOAF

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
Meat block							A					
Other Meats or Mixtures or Undesignated												
Bologna meat	56	30	12	39	20	31	100					
Dry Ingredients												
Salt	.01	0	0	0	40	0	3					
Sugar (sucrose)	.06	0	0	0	10	0	0.5					
Fruit & Vegetables												
Mixed vegetables	82	0	3	0	0	2	20					
Calculated composition 6% shrink												
Moisture							*55.9					
Fat							25.8					
Protein							10.9					
Properties												
% Collagen (Max. 35)							*36.9					
Bind Points (Min. 1.8)							2.1					
Color Points (Min. 2)							3.2					

VEGETABLE LOAF

Average Values

Section 2 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1							
Spices											
Cardamon	8	3.5	9	2							
Onion powder	5	1	10	2							
Pepper black	11	8.5	12	5							

Cooking Forms

Section 3 of 3

- 1. Pan
- 2. Mold

VENISON SAUSAGE

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations					
							A	B	C	D	E	F
Meat block												
Beef												
Fat, caul	5	93	1	95	0	0	20	20				
Pork												
Backfat	5	93	1	95	0	0			20	20		
Trim Reg	34	58	8	36	10	8					20	20
<u>Other Meats or Mixtures</u> <u>or Undesignated</u>												
Elk	71	8	21	20	30	48	80		80		80	
Venison	71	8	21	20	30	48		80		80		80
Dry Ingredients												
Dextrose	.06	0	0	0	10	0	0.25	0.25	0.25	0.25		
Salt	.01	0	0	0	40	0	2	2	2	2	2.1	2.1
Soy protein concentrate	8	0	75	0	45	0					3.5	3.5
Sugar (Sucrose)	.06	0	0	0	10	0					0.2	0.2
Moist Ingredients												
Water or ice	100	0	0	0	0	0	10	10	10	10	10	10
Fruit & Vegetables												
Garlic, fresh	61	0	6	0	0	0			0.25	0.25	0.25	
Calculated composition 15% shrink												
Moisture							53.4	53.4	53.4	53.4	57.2	57.3
Fat							26.2	26.2	26.1	26.1	18.2	18.2
Protein							17.8	17.8	17.8	17.8	21.3	21.3
Properties												
% Collagen (Max. 35)							20.9	20.9	20.9	20.9	18.7	18.7
Bind Points (Min. 1.8)							5.3	5.3	5.3	5.3	6.5	6.5
Color Points (Min. 2)							8.5	8.5	8.4	8.4	8.3	8.3

VENISON SAUSAGE

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2						
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25						
Spices											
Ginger	9	4	8.5	1							
Marjoram	4	7	11		1						
Nutmeg	8	33	7	1							
Pepper black	11	8.5	12		4						
Pepper, white	11	8.5	1.3	4							

VENISON SAUSAGE

Section 3 of 4

Processing Procedure

- A.
 - 1. Chill to 38°F
 - 2. Grind, 3/16" plate
 - 3. Mix
 - 4. Stuff, 24-26 mm lamb casings
 - 5. Hang, room temperature, 2 hours
 - 6. Heavy smoke and cook to internal temperature of 152°F
 - 7. Shower to 110°F internal temperature
 - 8. Dry
 - 9. Chill, 38°F
- B.
 - 1. Grind
 - 2. Mix
 - 3. Stuff
 - 4. Dry, room temperature, 45 minutes
 - 5. Smoke
 - 6. Cook to internal temperature of 152°F
 - 7. Chill, 38°F, 24 hours
- C.
 - 1. Grind
 - 2. Mix
 - 3. Stuff
 - 4. Dry, room temperature, 45 Minutes
 - 5. Smoke
 - 6. Steam cook to internal temperature of 152°F
 - 7. Chill, 24 hours, 38°F

Cooking Form

Section 4 of 4

- 1. A 38-40 mm hog casing
- 2. Lamb casing, 24-26 mm
- 3. See frankfurters for other appropriate cooking forms

VIENNA SAUSAGE (Or Use Frankfurter Recipe)

Average Values

Section 1 of 5

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Beef													
Bull F.C.	70	10	20	20	30	47	25						
Cheek meat	70	20	18	59	14	48		20	20	20	17		
Cow F.C.	68	14	18	21	24	39	25	20				80	60
Heart	70	13	17	27	6	40			5		8		
Lip	66	17	17	90	0	1			8	8			
Lungs	78	2	18	95	1	10					10		
Spleen	96	6	17	90	1	50					4		
Trim 70	55	30	15	39	20	31			8	18			
Tripe, fresh	82	10	9	100	0	0		20	11	11	17		
Pork													
Backfat	5	93	1	95	0	0			10	10		20	
Heart	73	10	15	27	6	32			10	5	8		
Snout	45	40	14	80	2	1				5	24		
Stomach	71	13	15	62	1	0			4	4	12		
Trim Reg	34	58	8	36	10	8	50	20	20	15			40
Trim 15 (fat)	11	85	3	60	3	1		20	4	4			
Dry Ingredients													
Cereal flour	12	1	10	0	18	0		3.5	2.6	2.6	24		
Salt	.01	0	0	0	40	0	3	3	3	3	3.3	3	3
Moist Ingredients													
Water or ice	100	0	0	0	0	0	25	18	12	12	40	30	20
Calculated composition 5% shrink													
Moisture							*57.6	*55.1	*54.2	53.2	*64.6	*62.3	*58.4
Fat							28.8	*31.7	*31.6	*32.5	11.8	23.6	27.0
Protein							11.1	9.8	10.9	11.1	10.8	11.6	11.9
Properties													
% Collagen (Max. 35)							25.1	*48.6	*53.8	*57.5	*59.1	21.9	24.6
Bind Points (Min. 1.8)							2.5	*1.4	*1.0	*1.2	*0.7	2.7	2.5
Color Points (Min. 2)							3.6	2.8	2.7	2.6	*1.9	4.4	3.8

VIENNA SAUSAGE (Or Use Frankfurter Recipe)

Average Values

Section 2 of 5

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							H	I					
Meat block													
Beef													
Heart	70	13	17	27	6	40	20						
Trim 90 (lean)	71	11	18	28	27	43	40						
Trim 70	55	30	15	39	20	31		60					
Pork													
Trim 50	36	52	10	34	12	9	40	40					
Dry Ingredients													
Salt	.01	0	0	0	40	0	3	2.5					
Sugar (sucrose)	.06	0	0	0	10	0		0.5					
Moist Ingredients													
Water or ice	100	0	0	0	0	0	20						
Calculated composition 5% shrink													
Moisture							*60.5	43.2					
Fat							23.8	*39.7					
Protein							12.5	13.3					
Properties													
% Collagen (Max. 35)							29.4	*37.4					
Bind Points (Min. 1.8)							2.2	2.3					
Color Points (Min. 2)							4.1	3.2					

VIENNA SAUSAGE (Or Use Frankfurter Recipe)

Average Values

Section 3 of 5

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4				
Curing Ingredients											
Na or K Nitrite	0.1	0	0	0.25	0.25	0.25					
Na or K Nitrate	0.1	0	0	1							
Na Erythorbate	0.1	0	0	0.87							
Spices											
Cardamon	8	3.5	9				0.5				
Cloves	7	22	6				0.5				
Coriander	5	18	15	2	2		2				
Mace	8	30	7			1					
Nutmeg	8	33	7	2	2		2				
Pepper black	11	8.5	12			4	2				
Pepper, red	8	17	12				1				
Pepper, white	11	8.5	1.3	5	5		2				

VIENNA SAUSAGE (Or Use Most Frankfurter Recipes) Section 4 of 5

Processing Procedures

A.

1. Grind beef, 1/8"
2. Grind pork, 1/4"
3. Chop
4. Stuff
5. Dry, 70°F, 20 minutes
6. Smoke
7. Cook to internal temperature of 145°F
8. Shower to 90°F
9. Dry, 70°F, 30 minutes
10. Chill, 45°F

B.

1. Fine chop

C.

1. Grind, beef, 1/8"
2. Grind, pork, 1/4"
3. Chop
4. Stuff
5. Dry, 70°F, 30 minutes
6. Smoke
7. Steam cook to internal temperature of 152°F
8. Shower to 100°F internal temperature
9. Dry, 70°F, 30 minutes
10. Chill, 45°F

D.

1. Canning

Cut to fit height of can
Fill with hot water or salt brine, or barbecue sauce or beans
and tomato sauce
Vacuum close cans
Retort

Cooking Forms

Section 5 of 5

1. A 22-32 artificial casing
2. A 20-32 artificial casing
3. Link 21-1/2"
4. Can
5. See frankfurters for other appropriate cooking forms

VINEGAR PICKLE

Section 1 of 2

Processing Procedure

- A.
1. Place mixed whole spice and lemon slices between sausage
 2. Dilute white vinegar with water, 50:50
 3. Pour over sausage to cover

Cooking Form

Section 2 of 2

1. Vat

WICK-A-WACK

Average Values

Section 1 of 4

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A						
Pork													
Skin	40	32	28	99	6	1	100						
Dry Ingredients													
Bread crumb	7	5	13	0	15	0	20						
Salt	.01	0	0	0	40	0	3						
Moist Ingredients													
Milk	87	3	4	0	0	0	10						
Calculated composition 8% shrink													
Moisture							32.2						
Fat							27.2						
Protein							25.3						
Properties													
% Collagen (Max. 35)							*89.5						
Bind Points (Min. 1.8)							*1.7						
Color Points (Min. 2)							*0.2						

WICK-A-WACK

Average Values

Section 2 of 4

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Pepper black	11	8.5	12	4							
Savory	9	6	7	1							

Processing Procedure

Section 3 of 4

A.

1. Salt, pork rines
2. Hold, 1 week
3. Boil, until tender
4. Chop
5. Add bread dipped in hot water
6. Season
7. Chop
8. Place, 1 inch deep in pan
9. Cover with milk
10. Bake for 30 minutes

Cooking Form

Section 4 of 4

1. Pan

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* PRODUCT INDEX *
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PRODUCT NAME	NO. OF MEAT COMBS.	NO. OF CURING & SPICE COMBS.	NUMBER OF PROCESSING PROCEDURE VARIATIONS	NO. OF COOKING FORMS	TOTAL NO. OF PRODUCT VARIATIONS	PAGE NO.
BACON AND LIVER SAUSAGE	SEE LIVER AND BACON SAUSAGE					
BACON, BEEF, BRINE CURE	2	2	2	1	8	
BACON, BEEF, DRY CURE	2	2	2	1	8	
BACON, BRINE CURE	2	2	2	1	8	
BACON, CANADIAN	SEE CANADIAN BACON					
BACON, DRY CURE	2	2	2	1	8	
BAKED HAM GLAZE	SEE GLAZE FOR BAKED HAM					
BARBECUE, BEEF OR PORK	9	9	1	1	81	
BARBECUE, LOAF	5	4	2	1	40	
BARBECUE SAUCE, POULTRY	SEE POULTRY BARBECUE SAUCE					
BEEF, CORNED	SEE CORNED BEEF					
BEEF, CORNED, HASH	SEE CORNED BEEF HASH					
BEEF, CORNED, LOAF	SEE CORNED BEEF LOAF					
BEEF, DRIED	2	2	2	1	8	
BEEF, DRIED, LOAF	SEE DRIED BEEF LOAF					
BEEF LOAF	6	6	6	2	432	
BEEF PATTY	2	2	—	1	4	
BEEF SAUSAGE	3	3	1	3	27	
BEER SALAMI	SEE SALAMI, COOKED					
BERLINER	4	3	3	3	108	
BILTONG (DRIED MEAT)	2	1	1	2	4	
BLOOD AND TONGUE SAUSAGE	6	6	5	3	540	
BLOOD HEAD SAUSAGE	1	1	1	3	3	
BLOOD SAUSAGE	14	9	7	4	3528	
BOCKWURST (WHITE SAUSAGE)	12	7	4	4	1344	
BOHEMIAN SAUSAGE	1	—	—	—	1	
BOLOGNA	57	25	10	6	85500	
BOLOGNA, BEEF	5	9	2	6	540	
BOLOGNA, COURSE GROUND	1	1	1	6	6	
BOLOGNA, ECONOMY	5	2	2	6	120	
BOLOGNA, ITALIAN (MORTADELLA)	1	1	1	6	6	
BOLOGNA, LEBANON	3	3	5	5	225	
BOLOGNA, LEONA	2	2	1	5	20	
BRAIN, SAUSAGE	1	1	1	1	1	
BRATWURST	15	14	11	4	9240	
BRAUNSCHWEIGER	36	19	9	4	24624	
BRAWN (PORK SIDE, BONES REMOVED) (ALSO SEE HEAD CHEESE)	1	—	2	1	2	
BREAKFAST SAUSAGE, BROWN'N SERVE	SEE BROWN'N SERVE BREAKFAST SAUSAGE					
BRINE	SEE PICKLE					
BRINE, CURING	SEE CURING BRINE					
BROWN'N SERVE BREAKFAST SAUSAGE	1	1	1	1	1	
BUTT, BONELESS, SMOKED	1	1	1	1	1	
CAVASSER SAUSAGE	1	1	1	1	1	

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* **PRODUCT INDEX** *
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PRODUCT NAME	NO. OF MEAT COMBS.	NO. OF CURING & SPICE COMBS.	NUMBER OF PROCESSING PROCEDURE VARIATIONS	NO. OF COOKING FORMS	TOTAL NO. OF PRODUCT VARIATIONS	PAGE NO.
CANADIAN BACON	1	1	3	2	6	
CAPICOLA	1	—	5	2	10	
CERVELAT	15	11	7	2	2310	
CHEESE AND MACARONI LOAF	SEE MACARONI AND CHEESE LOAF					
CHEESE AND PORK LOAF	SEE PORK AND CHEESE LOAF					
CHEESE AND TONGUE LOAF	SEE TONGUE AND CHEESE LOAF					
CHEESE FILLER	1	1	1	1	1	
CHEESEFURTER	2	2	2	1	8	
CHEESE LOAF	2	1	1	1	2	
CHICKEN JELLIED LOAF	1	1	1	1	1	
CHICKEN LOAF (IMITATION)	9	6	3	3	486	
CHICKEN, MOCK	SEE MOCK CHICKEN					
CHILI CON CARNI	12	7	4	1	336	
CHILI FRANKFURTER	SEE FRANKFURTER, CHILI					
CHINESE SAUSAGE	2	2	2	1	8	
CHOP SUEY LOAF	4	1	1	1	4	
CHORIZOS	22	11	9	4	8712	
COATING BATTER, POULTRY	POULTRY COATING BATTER					
COMBINATION LOAF	1	—	1	1	1	
CORNEB BEEF	8	2	9	2	288	
CORNEB BEEF HASH	9	6	2	2	216	
CORNEB BEEF LOAF	3	3	3	4	108	
COTECHINO	1	1	1	2	2	
COTTO SALAMI	SEE SALAMI, COOKED					
CRACKLING	1	—	2	1	2	
CURED SHOLDER	SEE SHOLDER, CURED					
CURING BRINE	4	4	1	1	16	
DANISH DRY SAUSAGE	2	3	2	1	12	
DEBRECZINER	2	1	1	1	2	
DEVILED HAM	2	2	2	1	8	
DICED LOAF	1	1	1	1	1	
DUTCH LOAF	7	5	3	3	315	
(SEE ALSO, OLD FASHION LOAF)						
DRIED BEEF LOAF	3	3	2	2	36	
DRIED MEAT	SEE BILTONG					
DRY SAUSAGE, DANISH	SEE DANISH DRY SAUSAGE					
EGG AND HAM JELLIED SALAD	SEE HAM AND EGG JELLIED SALAD					
EGG AND HAM LOAF	SEE HAM AND EGG LOAF					
FARMERS SAUSAGE	4	5	4	4	320	
FRANKFURTER	98	49	14	5	336140	
FRANKFURTER CANNED	1	—	2	1	2	
FRANKFURTER, CHILI	4	1	1	5	20	
FRISSES ISOPPERES(SATAI)	1	1	1	1	1	
GALICIAN (GALACIAN) SAUSAGE	2	1	1	1	2	

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* PRODUCT INDEX *
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PRODUCT NAME	NO. OF MEAT COMBS.	NO. OF CURING & SPICE COMBS.	NUMBER OF PROCESSING PROCEDURE VARIATIONS	NO. OF COOKING FORMS	TOTAL NO. OF PRODUCT VARIATIONS	PAGE NO.
GARLIC SAUSAGE	4	2	2	1	16	
GELATIN SOLUTION	2	1	—	1	2	
GENOA SALAMI	SEE SALAMI DRY, SEMIDRY					
GLAZE FOR BAKED HAM	6	3	3	1	54	
GOTEBORG	8	3	3	2	144	
GOTHER	1	1	—	1	1	
GOULASH, HUNGARIAN	4	1	1	1	4	
GROUND MEAT AND GROUND MEAT WITH VEGETABLE PROTEIN	27	6	1	1	162	
HAM AND EGG JELLIED SALAD	1	1	1	1	1	
HAM AND EGG LOAF	1	1	—	1	1	
HAM AND TONGUE SPREAD	1	1	1	1	1	
HAM, BAKED, GLAZE FOR	SEE GLAZE FOR BAKED HAM					
HAM, BOILED	1	1	7	1	7	
HAM, BRINE AND DRY CURE OR BRINE CURE SMOKED	1	1	2	1	2	
HAM, CANNED	1	1	3	1	3	
HAM, DEVILED	SEE DEVILED HAM					
HAM, DEWEY	1	1	1	1	1	
HAM LOAF	5	3	2	1	30	
HAM, MINCED OR CHOPPED	4	4	3	4	192	
HAM, BRINE OR DRY CURE	2	2	3	2	24	
HAM SPREAD	1	—	1	1	1	
HAM, WESTPHALIAN	1	1	1	1	1	
HEAD CHEESE (BRAWN)	17	14	11	6	15708	
HEAD, TONGUE CHEESE	SEE TONGUE, HEAD CHEESE					
HEIDELBERG	SEE SWEET, SOUR LOAF					
HOLSEINER, DRY (SALMI B.C.)	2	3	3	1	18	
HONEY LOAF	5	2	2	1	20	
HUNGARIAN GOULASH	SEE GOULASH, HUNGARIAN					
HUNGARIAN KIELBOSA	SEE KIELBOSA, HUNGARIAN					
ITALIAN BOLOGNA	SEE BOLOGNA, ITALIAN					
ITALIAN COOKED SAUSAGE	1	2	1	1	2	
ITALIAN FRESH SAUSAGE	2	3	2	1	12	
ITALIAN MEATLOAF	SEE MEATLOAF, ITALIAN					
ITALIAN SALAMI	SEE SALAMI, ITALIAN					
ITALIAN SAUSAGE	3	3	2	2	36	
ITALIAN SAUSAGE, HOT	5	5	3	3	225	
ITALIAN, SWEET	2	2	2	1	8	
JERKEY	7	1	1	1	7	
KK	SEE KRAKOWSKA					
KIELBASA	SEE POLISH					
KIELBASA (POLISH SAUSAGE)	6	2	3	2	72	
KIELBOSA, HUNGARIAN	1	2	1	2	4	

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* **PRODUCT INDEX** *
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PRODUCT NAME	NO. OF MEAT COMBS.	NO. OF CURING & SPICE COMBS.	NUMBER OF PROCESSING PROCEDURE VARIATIONS	NO. OF COOKING FORMS	TOTAL NO. OF PRODUCT VARIATIONS	PAGE NO.
KNOACKWURST (KNOBLAUCH)	12	12	8	8	9216	
KRAKAUER	3	3	3	2	54	
KRAKOWSKA (KK)	2	1	2	1	4	
LANDJAEGAR (LANDJAGER)						
LANDJAEGER SWISS SAUSAGE)	5	4	3	3	180	
LEBANON BOLOGNA	SEE BOLOGNA, LEBANON					
LEBERKASE	2	2	2	2	16	
LEONA BOLOGNA	SEE BOLOGNA, LEONA					
LINGUISA	3	2	2	2	24	
LIVER AND BACON SAUSAGE	3	2	1	2	12	
LIVER CHEESE	2	2	1	1	4	
LIVER LOAF	21	13	7	4	7644	
LIVER PATE	13	9	5	1	585	
LIVER SAUSAGE	52	36	11	9	185328	
LOAF	18	14	6	3	4536	
LOAF COATING	5	4	2	1	40	
LONGANIZA	1	2	1	3	6	
LOUISIANA HOT SAUSAGE	2	1	1	1	2	
LUNCHEON LOAF	12	9	2	1	216	
LUNCHEON MEAT	6	5	5	3	450	
MACARONI AND CHEESE LOAF	8	7	4	2	448	
MARINADE, POULTRY	SEE POULTRY MARINADE					
MEATBALLS	10	10	3	1	300	
MEAT LOAF	18	12	1	1	216	
MEATLOAF, ITALIAN	4	1	2	1	8	
MEATLOAF, SPANISH	3	1	—	1	3	
METTWURST	13	14	8	2	2912	
MILANO SALAMI	SEE SALAMI, DRY, SEMIDRY					
MINCED HAM (OR STYLE)	4	4	4	5	320	
MINCED LUNCHEON	2	1	—	1	2	
MINCED MEAT	3	3	2	1	18	
MOCK CHICKEN	6	4	2	1	48	
MORTADELLA (SEE ALSO BOLOGNA, ITALIAN)	15	8	7	3	2520	
NAPOLI SALAMI	SEE SALAMI, NAPOLI					
NEW ENGLAND LOAF	11	7	6	5	2310	
NOLA SALAMI	SEE SALAMI, DRY, SEMIDRY					
OLD FASHION LOAF (DUTCH LOAF)	6	3	2	1	36	
OLIVE LOAF	4	3	2	2	48	
PASTRAMI	5	3	3	1	45	
PATTY	2	2	3	1	12	
PEMMICAN	4	—	1	2	8	
PEPPER LOAF	6	3	3	1	54	
PEPPERONI	13	6	3	3	702	

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* PRODUCT INDEX *
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PRODUCT NAME	NO. OF MEAT COMBS.	NO. OF CURING & SPICE COMBS.	NUMBER OF PROCESSING PROCEDURE VARIATIONS	NO. OF COOKING FORMS	TOTAL NO. OF PRODUCT VARIATIONS	PAGE NO.
PICKLE AND PIMIENTO LOAF	14	7	3	3	882	
PICKLE (BRINE)	2	1	3	1	6	
PICKLED PIG FEET	2	2	3	2	24	
PICKLE LOAF	1	1	1	1	1	
PICKLE, VINEGAR	SEE VINEGAR PICKLE					
PICNIC	2	2	3	2	24	
PIG FEET, JELLIED	2	2	3	2	24	
PIG FEET, PICKLED	SEE PICKLED PIG FEET					
PIMIENTO AND PICKLE LOAF	SEE PICKLE AND PIMENTO LOAF					
PIMIENTO LOAF	4	1	1	1	4	
POLISH (KIELBASA)	22	12	7	6	1108	
POLISH SAUSAGE	SEE KIELBASA					
PORK AND CHEESE LOAF	1	1	1	1	1	
PORK LOAF	5	2	2	2	40	
PORKLOIN, CURED	2	1	2	1	4	
PORK SAUSAGE	44	45	10	14	277200	
PORK, TONGUE, JELLIED	SEE TONGUE, PORK, JELLIED					
POTATO SAUSAGE	6	5	3	4	360	
POTTED MEAT	1	1	1	1	1	
POULTRY BARBECUE SAUCE	1	1	1	1	1	
POULTRY COATING BATTER	2	—	—	1	2	
POULTRY MARINADE	1	1	1	1	1	
PRAGUE SAUSAGE (PROSCHKE)	1	1	1	1	1	
PRESSED LOAF	7	4	5	1	140	
PROSCHKE	SEE PRAGUE SAUSAGE					
PROSCIUTTI	1	1	1	1	1	
PUDDING, SCOTCH	1	2	1	1	2	
RABBIT SAUSAGE	2	2	1	1	4	
ROAST BEEF LOAF	4	3	1	3	36	
ROAST PIG	1	1	1	1	1	
ROLL	3	4	2	2	48	
ROYAL CAMBRIDGE SAUSAGE	1	—	1	1	1	
SALAMI B.C.	SEE HOLSEINER, DRY					
SALAMI, COOKED (COTTO, BEER)	45	30	16	8	172800	
SALAMI, DRY, SEMIDRY (GENOA, MILANO, NOLA, SORRENTOL)	21	13	11	6	18018	
SALAMI, FRESH, SMOKED	1	1	1	1	1	
SALAMI, ITALIAN	2	2	1	2	8	
SALAMI, NAPOLI	1	1	1	1	1	
SALISBURY STEAK	6	2	2	1	24	
SANDWICH SPREAD	2	1	1	1	2	
SAUCE	8	6	5	2	140	
SAUERBRATEN	3	3	1	1	9	
SAUSAGE	37	29	8	4	34336	

[illegible]

APPENDIX

TEMPLATE

Average Values

Section 1 of 9

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Beef													
Blood, strained	90	1	7	0	15	15							
Brain	79	9	10	85	1	0							
Brisket	65	15	18	40	12	19							
Bull F.C.	70	10	20	20	30	47							
Cheek meat	70	20	18	59	14	48							
Chuck	66	16	18	30	24	38							
Clod	72	7	20	25	27	42							
Cooked beef	63	5	31	34	16	42							
Cooking broth beef	99	0	1	0	0	0							
Corned beef, canned	44	32	22	30	18	16							
Corned beef, cured	44	30	23	30	20	16							
Cow F.C.	68	14	18	21	24	39							
Cured beef	58	30	12	30	18	30							
Fat	5	94	1	95	0	0							
Fat, brisket	5	93	1	95	0	0							
Fat, caul	5	93	1	95	0	0							
Fat, cured	15	80	5	92	0	0							
Flank	43	42	13	24	12	20							
Head meat	66	16	17	73	8	26							
Heart	70	13	17	27	6	40							
Jerky	34	7	53	21	20	50							
Lip	66	17	17	90	0	1							
Liver	72	7	20	95	2	50							
Lungs	78	2	18	95	1	10							
Lungs, cooked	68	4	26	95	1	3							
Navels	40	50	10	42	14	21							
Neck bone trim	70	10	20	22	30	40							
Plate	41	40	18	42	16	25							
Ribs, bone in	45	28	14	--	--	--							
Round	73	5	21	20	27	45							
Rump	63	18	18	20	26	38							
Shank	71	7	21	48	28	46							
Shank, cured	73	6	20	48	28	30							
Spleen	96	6	17	90	1	50							
Suet, rendered	0	100	0	0	0	0							
Tongue	66	16	18	60	7	61							
Tongue, cured	65	17	16	58	8	45							

TEMPLATE

Average Values

Section 2 of 9

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Beef													
Trim 90 (lean)	71	11	18	28	27	43							
Trim 85	66	15	18	28	26	41							
Trim 80	63	20	17	30	24	39							
Trim 75	58	25	16	38	22	34							
Trim 70	55	30	15	39	20	31							
Trim 65	50	35	14	39	18	28							
Trim 60	45	43	12	40	16	25							
Trim 50	38	50	11	42	12	19							
Trim 40	27	65	7	36	8	14							
Tripe, cooked	80	2	19	100	0	0							
Tripe, fresh	82	10	9	100	0	0							
Calf													
Brain	79	9	10	85	1	0							
Liver	71	5	19	95	2	35							
Veal													
Cured	67	9	18	25	25	27							
Lean	69	10	19	27	26	30							
Lean 65%	50	35	14	38	30	20							
Sides, deboned	71	8	20	30	22	30							
Pork													
Backfat	5	93	1	95	0	0							
Backfat, rendered	11	83	5	95	0	0							
Bacon ends	19	68	12	86	1	3							
Bacon, raw	35	55	8	86	0	3							
Belly	29	61	9	86	0	3							
Belly trim	25	68	6	35	6	5							
Brains	79	9	10	85	1	0							
Butt	57	29	13	27	16	15							
Cheek meat	67	15	17	72	9	29							
Cheek meat, cured	67	15	17	72	7	25							
Cured	57	28	13	31	14	20							
Cured, boiled	55	25	18	25	10	15							
Defatted solids	10	3	86	95	0	0							
Diaphragm	67	17	15	70	16	18							
Ears	68	17	13	99	1	1							
Ears, salted	50	22	28	99	2	1							

TEMPLATE

Average Values

Section 3 of 9

Meat block	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Pork													
Fat	5	93	1	95	0	0							
Fat, caul	5	93	1	95	0	0							
Feet, meat	67	15	17	55	20	20							
Ham, deviled	51	32	14	30	6	20							
Ham fat	5	93	1	95	0	0							
Ham fat, cured	15	81	4	93	0	0							
Ham, fresh	71	7	20	24	18	21							
Ham skin, cured	42	31	27	99	3	1							
Ham, smoked	71	7	20	24	15	18							
Ham, trim	70	9	19	27	17	20							
Ham, trim, cooked	60	10	23	27	15	15							
Ham trim, 80, lean cured	60	23	16	25	14	20							
Head meat	65	16	17	70	7	16							
Head meat, cured	67	15	16	70	5	13							
Head, whole, meat	62	17	17	80	5	20							
Heart	73	10	15	27	6	32							
Jowl, skinned	24	71	5	43	5	2							
Lard, melted	0	100	0	0	0	0							
Lips	71	14	15	90	1	1							
Liver	73	7	19	24	2	49							
Liver, cooked	54	12	30	24	2	49							
Liver, cured	70	8	20	20	1	40							
Loin, meat	57	25	17	23	16	25							
Meat, smoked	62	22	15	25	10	22							
Picnic	59	25	16	23	20	16							
Picnic, cured	59	25	16	23	20	12							
Pig, 4-6 weeks, deboned	73	6	20	25	15	20							
Plate	25	65	9	86	1	2							
Ribs, bone in	32	20	9	--	--	--							
Rind, emulsion	38	34	27	60	1	0							
Rind, pickled	40	32	28	99	6	1							
Sausage	38	51	9	34	10	5							
Shank	69	9	21	55	20	25							
Shoulder	58	27	14	25	18	15							
Side deboned	33	57	9	36	10	8							
Skin	40	32	28	99	6	1							
Skin, cooked	10	18	70	99	0	0							

TEMPLATE

Average Values

Section 4 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
Meat block							A	B	C	D	E	F	G
Pork													
Snout	45	40	14	80	2	1							
Snout, pickled	45	40	14	80	2	1							
Spleen	76	6	17	90	1	50							
Stomach	71	13	15	62	1	0							
Tongue	63	19	17	66	8	36							
Tongue, cured	65	17	16	58	8	45							
Trim 80 (lean)	60	23	16	25	16	25							
Trim 80 (lean) cooked	52	27	20	25	10	22							
Trim 80 (lean) cured	62	22	15	25	18	22							
Trim 50	36	52	10	34	12	9							
Trim 50, cured	36	52	10	34	10	7							
Trim Reg	34	58	8	36	10	8							
Trim, reg, cured	34	58	8	36	8	6							
Trim 15 (fat)	11	85	3	60	3	1							
Trim 15 (fat) cured	11	85	3	60	1	1							
Tripe	74	15	10	100	0	0							
Tripe, cooked	80	2	19	100	0	0							
Poultry													
Chicken													
Fat	5	95	1	95	0	0							
Gizzard	70	7	20	35	7	25							
Heart	71	11	16	27	6	32							
Liver	70	4	21	24	2	49							
Meat	57	25	17	18	23	19							
Skin, cooked	22	15	60	99	6	0							
Stewing hen	70	7	21	18	24	20							
Turkey													
Broth	99	0	1	0	0	1							
Fat	5	93	1	95	0	0							
Gizzard	70	7	20	35	7	25							
Heart	71	11	16	27	6	32							
Liver	70	4	21	24	2	49							
Meat	68	7	24	18	23	19							
Skin	48	39	12	99	6	0							
Skin, cooked	22	15	60	99	6	0							

TEMPLATE

Average Values

Section 5 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Other Meats or Mixtures or Undesignated													
Blood, cured	81	1	18	0	15	180							
Bologna, broken	56	30	12	31	8	20							
Bologna meat	56	30	12	39	20	31							
Bone	12	30	18	--	--	--							
Bone, marrow fat	0	100	0	0	0	0							
Bouillon cube	1	3	20	0	0	20							
Cooking broth	99	0	1	0	0	5							
Elk	71	8	21	20	30	48							
Frankfurter	56	26	13	25	8	20							
Goat, cheek, cured	72	18	18	32	14	48							
Goat trim, cured	68	13	18	30	26	40							
Lamb, side, deboned	66	15	18	25	25	25							
Loaf	56	30	12	31	8	20							
Mutton, cheek, cured	72	18	18	32	14	48							
Mutton trim cured	68	13	18	30	26	40							
Rabbit	70	8	21	35	18	17							
Rework	56	30	12	31	8	20							
Salami meat	58	28	12	39	20	31							
Salami meat, cooked	56	30	12	31	8	20							
Salami, rework	50	32	16	31	8	20							
Sardine, boned	64	12	19	5	5	10							
Venison	71	8	21	20	30	48							
Dry Ingredients													
Barley	11	1	9	0	12	0							
Bread crumb	7	5	13	0	15	0							
Buckwheat	12	2	12	0	18	2							
Buckwheat, groat	11	2	12	0	10	0							
Caseinate	10	0	90	0	40	0							
Cereal flour	12	1	10	0	18	0							
Cheese, cheddar	37	32	25	0	0	1							
Cheese, longhorn	37	32	25	0	0	1							
Cornflake	4	0	8	0	10	0							
Corn flour	29	21	8	0	18	0							
Corn meal, white	12	4	9	0	16	0							
Corn meal, yellow	12	4	9	0	16	5							

TEMPLATE

Average Values

Section 6 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Dry Ingredients													
Corn starch	12	1	0	0	20	0							
Corn syrup solids	3.5	0	0	0	5	0							
Cracker meal	4	13	9	0	15	0							
Dextrose	.06	0	0	0	10	0							
Flour, all purpose	12	1	10	0	20	0							
Farina	10	1	11	0	16	0							
Gelatin	13	0	85	0	20	0							
Ginger snap	3	9	5	0	10	0							
Hydrolyzed Veg.													
Protein (HVP)	10	0	31	0	20	0							
Isolated soy protein	8	0	90	0	40	0							
Kidney bean, dry	10	2	22	0	0	0							
Macaroni	10	1	12	0	15	0							
MSG	0	0	0	0	0	0							
Mustard, heat treated	6	25	31	0	16	5							
Non-fat dry milk	3	1	38	0	25	0							
Noodle, raw	10	5	13	0	10	2							
Oatmeal	8	7	14	0	15	0							
Peanut grit	5	48	26	0	18	0							
Phosphate	1	0	0	0	40	0							
Pistachio nut	5	54	19	0	0	0							
Pistachio nut, peeled & boiled in wine	10	50	17	0	0	0							
Plant protein hydrolysate	8	0	30	0	20	0							
Rice	12	1	7	0	40	0							
Rice flour	3	0	5	0	40	0							
Rusk	5	9	14	0	16	0							
Rye flour	11	2	12	0	16	0							
Saccharin	0	0	0	0	0	0							
Salt	.01	0	0	0	40	0							
Semolina flour	12	1	10	0	18	0							
Soy flour	8	1	47	0	30	0							
Soy protein concentrate	8	0	75	0	45	0							
Starch	12	1	0	0	30	0							
Sugar, brown	2	0	0	0	0	0							
Sugar (sucrose)	.06	0	0	0	10	0							

TEMPLATE

Average Values

Section 7 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Dry Ingredients													
Textured veg. protein	8	1	50	0	35	0							
Wheat, fines	12	2	12	0	18	0							
Moist Ingredients													
Brandy	65	0	0	0	0	0							
Bread soaked in milk and squeezed	53	3	7	0	10	0							
Butter	15	81	1	0	0	1							
Cognac	62	0	0	0	0	0							
Corn syrup	20	0	0	0	5	0							
Cream, light	62	31	2	0	0	0							
Egg	74	12	13	0	0	1							
Egg white, cooked	86	0	10	0	0	0							
Honey	17	0	0	0	0	1							
Mavonnaise	15	80	1	0	0	0							
Milk	87	3	4	0	0	0							
Molasses	24	0	0	0	18	20							
Oil	0	100	0	0	0	0							
Precooked wheat	87	0	2	0	20	0							
Rum	57	0	0	0	0	0							
Salad dressing	41	42	1	0	0	0							
Spaghetti, cooked	72	0	3	0	15	0							
Textured Veg. Protein, hydrated	74	0	14	0	10	0							
Water, hot	100	0	0	0	0	0							
Water or ice	100	0	0	0	0	0							
Wine, sherry	85	0	0	0	0	10							
Wine, white	85	0	0	0	0	0							
Worcestershire sauce	62	1	6	0	0	90							
Fruit & Vegetables													
Apple, fresh	85	0	0	0	0	0							
Apricot pulp, cooked	89	0	1	0	0	5							
Bean sprouts	89	0	4	0	0	0							
Capers	94	0	1	0	0	0							
Carrot	88	0	1	0	0	15							
Carrot, cooked	91	0	1	0	0	20							
Catsup	69	1	2	0	0	80							
Celery, fresh ground	94	0	1	0	0	0							

TEMPLATE

Average Values

Section 8 of 9

	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Fruit & Vegetables													
Cider	88	0	0	0	0	0							
Citron	80	0	1	0	0	0							
Cranberry sauce	62	0	0	0	0	90							
Current	85	0	2	0	0	0							
Fruit, dried	22	1	2	0	0	0							
Garlic, fresh	61	0	6	0	0	0							
Leeks	85	0	2	0	0	0							
Lemon	90	0	1	0	0	0							
Lemon juice	91	0	1	0	0	0							
Lemon peel	82	0	1	0	0	1							
Lemon peel and juice	87	0	1	0	0	0							
Lemon peel, candied	17	0	1	0	0	0							
Mixed vegetables	82	0	3	0	0	2							
Mushroom	76	3	20	0	0	0							
Mushroom soup	90	4	1	0	0	0							
Olive	78	13	1	0	0	0							
Onion	89	0	1	0	0	0							
Onion, green	87	0	1	0	0	0							
Orange	88	0	1	0	0	2							
Orange, marmalade	29	0	1	0	0	2							
Orange, peel, candied	17	0	0	0	0	5							
Parsley, chopped	85	1	4	0	0	0							
Parsley, green	85	1	4	0	0	0							
Pea	78	0	6	0	0	0							
Peach pulp, cooked	91	0	1	0	0	2							
Pea, cooked	81	0	5	0	0	0							
Pepper, green	93	0	1	0	0	0							
Pepper, sweet	93	0	1	0	0	0							
Pickle, relish	63	1	0	0	0	0							
Pickle, sour	94	0	1	0	0	0							
Pickle, sweet	61	1	1	0	0	0							
Pineapple, slices	84	0	0	0	0	0							
Pineapple juice	86	0	0	0	0	0							
Pineapple preserves	29	0	1	0	0	0							
Pimiento	92	1	1	0	0	60							
Potato, boiled	83	0	2	0	0	0							
Potato, dehydrated	5	1	7	0	0	0							

TEMPLATE

Average Values							Section 9 of 9						
	M o i s t u r e	F a t	P r o t e i n	% C o l l a g e n	B i n d	C o l o r	Pounds for Various Formulations						
							A	B	C	D	E	F	G
Meat block													
Fruit & Vegetables													
Potato, fresh	80	0	2	0	0	0							
Raisin, seedless	18	0	1	0	0	0							
Spinach	91	0	3	0	0	0							
Tomato	92	0	1	0	0	60							
Tomato juice	94	0	1	0	0	40							
Tomato paste	75	1	3	0	0	90							
Tomato puree	87	0	2	0	0	70							
Truffle, canned	75	0	9	0	0	0							
Turnip	90	0	3	0	0	0							
Water chestnut	12	1	0	0	0	0							
Calculated composition % shrink													
Moisture													
Fat													
Protein													
Properties													
% Collagen (Max. 35)													
Bind Points (Min. 1.8)													
Color Points (Min. 2)													

Average Values

Section 1 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Curing Ingredients											
Na or K Nitrite	0.1	0	0								
Na or K Nitrate	0.1	0	0								
Prague Powder	0	0	0								
Na Ascorbate	0.1	0	0								
Na Erythorbate	0.1	0	0								
Ascorbic Acid	0.1	0	0								
Erythorbic Acid	0.1	0	0								
Na Acid Phosphate	0	0	0								
Citric Acid	0.1	0	0								
GDL	0	0	0								
Antioxidant	0	0	0								
Spices											
Alcohol	66	0	0								
Allspice	8.5	8.7	6								
Allspice, soluble	0	0	0								
Anise	10	16	18								
Anise seed	10	16	18								
Basil	6	4	14								
Bay leaves	5	8	8								
Bitters	3	14	8								
Bitters, angostura	3	14	8								
Brandy, flavor	20	5	0								
Capsicum O.R.	0	100	0								
Caraway	10	15	20								
Caraway seeds	10	15	20								
Caraway seed, ground	10	15	20								
Cardamon	8	3.5	9								
Caramel color	0	0	0								
Cassia	10	7	4								
Cayenne	8	17	12								
Celery, dry, ground	6	25	18								
Celery seed	6	25	18								
Celery seed, ground	6	25	18								
Cerelose (glucose)	0	0	0								
Chili pepper	8	17	12								
Chili powder	8	12	14								
Chilies	10	17	12								
Chili sauce	94	0	1								
Chives	91	0	2								
Cinnamon	10	3	4								

Average Values

Section 2 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Cloves	7	22	6								
Coriander	5	18	15								
Cumin	8	22	18								
Cumin seed	8	22	18								
Curacao	20	5	0								
Dill	7	4	20								
Fennel	9	15	16								
Fennel, cracked	8	15	16								
Fennel, seed	9	15	16								
Fennel seed ground	8	22	18								
Garlic juice	95	0	1								
Garlic, Powder	6	1	17								
Ginger	9	4	8.5								
Horseradish	87	0	1								
Juniper berry	83	1	0								
Lemon Extract	20	5	0								
Lemon flavor	20	5	0								
Lemon oil	0	100	0								
Liquid smoke	80	0	0								
Mace	8	30	7								
Maple extract	20	5	0								
Maple flavor	35	0	0								
Marjoram	4	7	11								
Mustard	6	24	30								
Mustard, prepared	80	4	5								
Mustard seed	78	29	25								
Nutmeg	8	33	7								
Nutmeg, oil	0	100	0								
Onion chips	4	1	9								
Onion chip, toasted	2	1	9								
Onion, granulated	4	1	9								
Onion juice	95	0	1								
Onion powder	5	1	10								
Oregano	7	10	11								
Paprika	10	13	15								
Parsley	85	1	4								
Parsley, dry	9	4	2								
Parsley flakes	9	4	23								
Pepper black	11	8.5	12								
Pepper, black, cracked	9	9	11								

Average Values

Section 3 of 3

	M o i s t u r e	F a t	P r o t e i n	Oz. unless indicated otherwise per 100 lbs. of meat							
				1	2	3	4	5	6	7	8
Spices											
Pepper, black decorticated	11	9	1								
Pepper, black, whole	12	9	11								
Pepper, red	8	17	12								
Pepper, red, cracked	8	17	12								
Pepper, white	11	8.5	1.3								
Pepper, white, cracked	11	8	10								
Pepper, white, whole	11	8	10								
Pickle, liquid	95	0	1								
Pimiento, juice	95	1	1								
Pimiento, powder	8	17	12								
Rosemary	9	15	5								
Rum flavoring	20	5	0								
Sage	3	14	8.5								
Sage, rubbed	8	13	11								
Savory	9	6	7								
Sesame seed	5	55	26								
Soy sauce	63	1	6								
Tarragon	8	7	23								
Thyme	8	7	9								
Tumeric	11	10	8								
Vinegar	94	0	0								
Vinegar and wort	93	0	0								